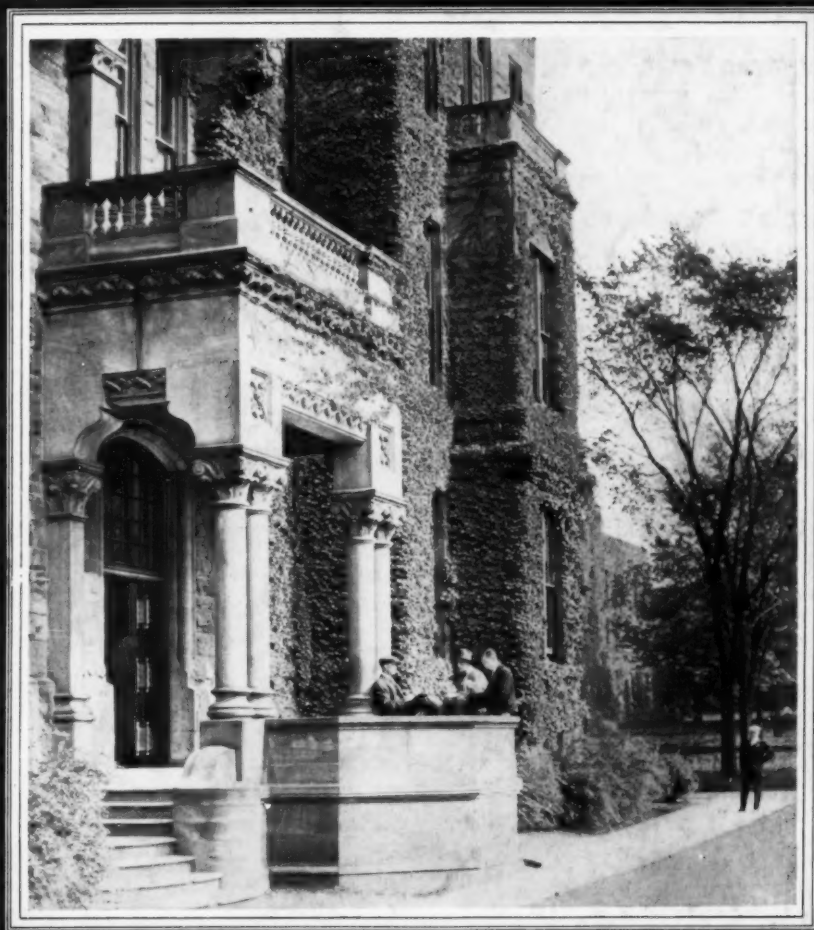


The NATION'S SCHOOLS

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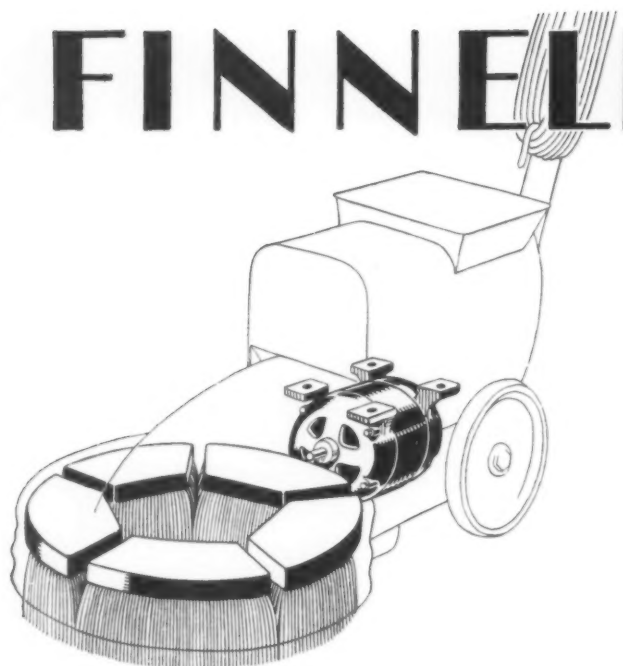
VOL. III
No. 3

MARCH
1929



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A FINNELL



Supt. of Bldgs. in the N. C. State College of A. and E., Mr. Wellons, writes:

"The Finnell System has saved us over 50% in our labor and gives us a much cleaner floor. Four men are now doing what it required twelve men to do before we installed the Finnell."

is more than just five brushes and a motor

IT IS not so much what you see as what you cannot see in a FINNELL that makes it the logical choice of a school superintendent or business manager investing in floor scrubbing polishing equipment.

In every FINNELL there is a lifetime of inventive skill—placed there by the man who first developed a workable power driven floor scrubber. There's a quarter century of mechanical development. There is a widespread organization—a service branch in more than thirty of the country's large cities besides those in Canada, England, Australia and Sweden.

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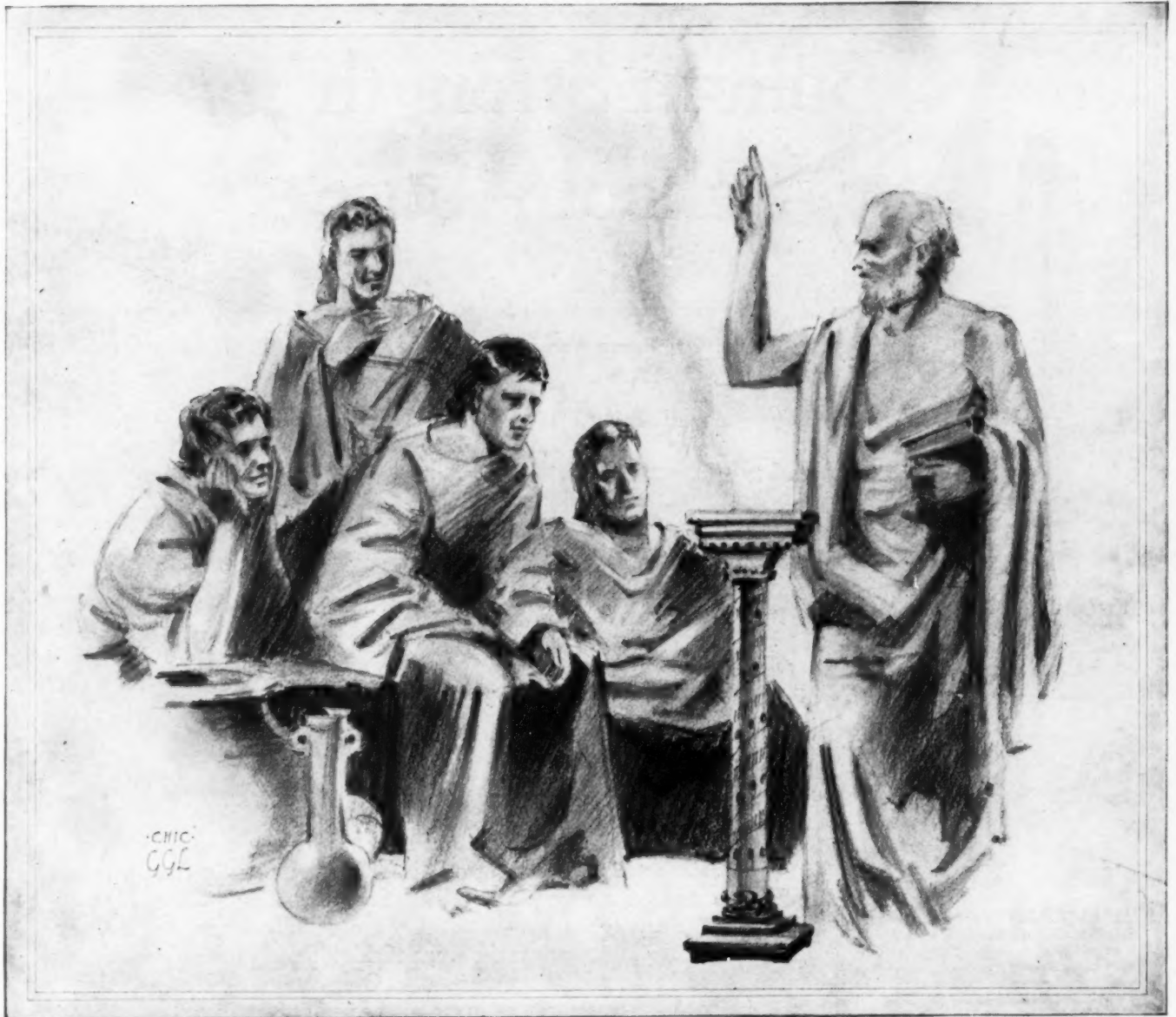
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It waxes
It scrubs*

aid of a corps of floor maintenance experts who have met and mastered every conceivable floor maintenance problem. You get a machine that can wax, polish or scrub with equal ease and efficiency. It can also remove varnish and do light sanding.

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ELECTRIC FLOOR MACHINE



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Nowadays, with a single school attended by several thousand students instead of a mere 10 or 12, the problem of heating and

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Get in touch with an American Blower representative. There is a branch office near you . . . You will not be obligated.

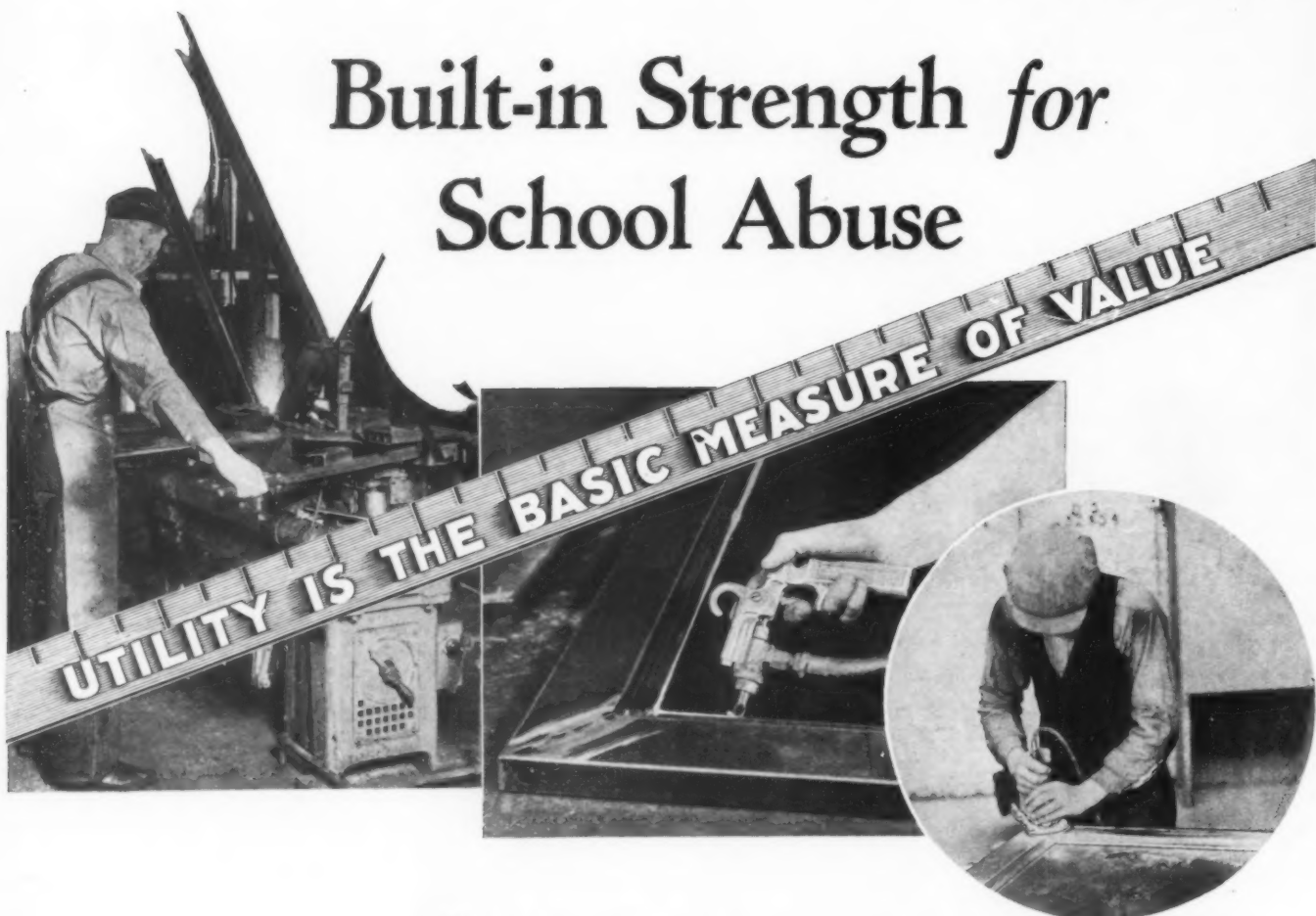
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Built-in Strength for School Abuse



At top left we show how each door corner is electrically welded into a solid unit. The middle photograph illustrates how we seal each door joint to prevent corrosion and to insure cleanliness. Lower right illustration shows the finishing and polishing of all corners to obtain smoothness and pleasing appearance.

SCHOOL architects, builders, and schools boards everywhere know and appreciate the great amount of misuse and abuse toilet compartments in public and private schools receive. School children are not only careless with such equipment—often they are wilfully destructive. Quite naturally the toilet door bears the brunt of this kicking, pushing and shoving at recess and after school is dismissed. Only equipment that is designed to withstand the worst mistreatment possible will give satisfaction.

WEI STEEL compartment doors are fabricated from copper bearing sheet steel, electrically welded into a substantial unit. The four corner joints of the mitered stiles and rails are electrically welded by an exclusive process. The unique reinforcements, illustrated at the side, become, by this process, an integral part of each corner of the door, making the corners actually the strongest part of the unit. These joints are then finished flush and smooth, insuring a pleasing appearance.

These extra construction features make WEI STEEL equipment the most economical equipment you can buy. We shall be glad to tell you of a school installation near you for you to see. Write us today . . . No obligation, of course . . . HENRY WEIS MANUFACTURING COMPANY, INC., Elkhart, Indiana.



An exclusive WEI STEEL feature is this inside reinforcement, which furnishes additional material for the fusing operation and makes a solid joint.

WEI STEEL

SHOWER STALLS-COMPARTMENTS-CUBICLES

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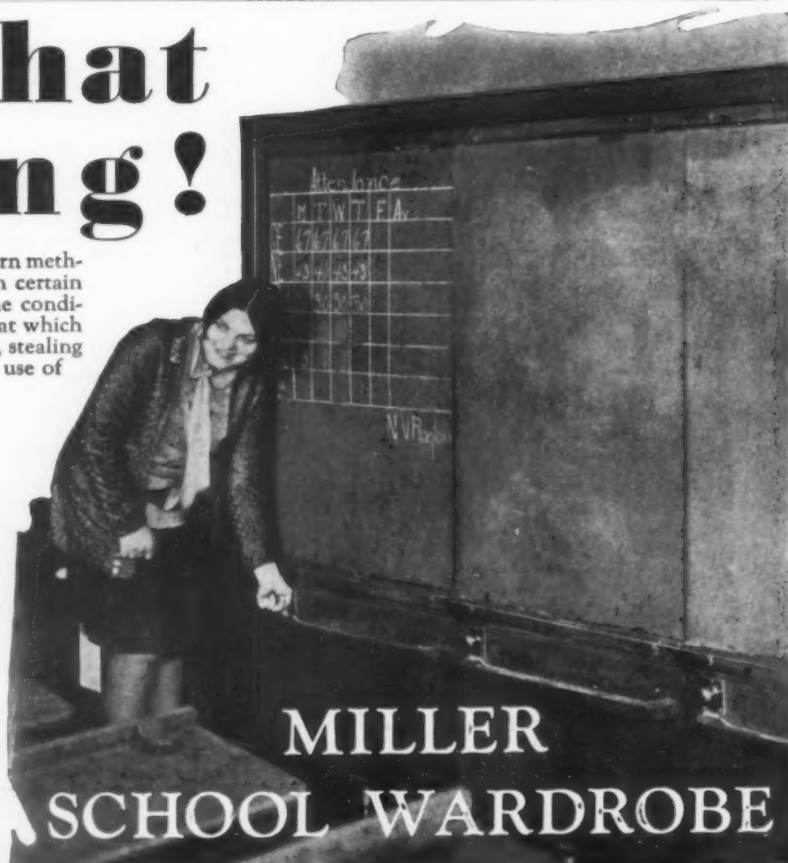
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Private detectives... rigorous punishment... stern methods—all were unable to stop petty pilfering in certain old school houses of a Kansas metropolis. The condition resulted in a public indignation meeting at which school patrons complained to the board! Yet, stealing could have been practically eliminated by the use of

Miller School Wardrobes

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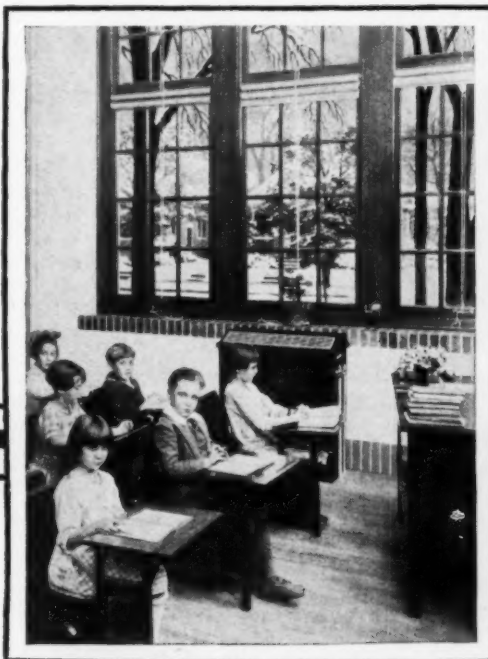


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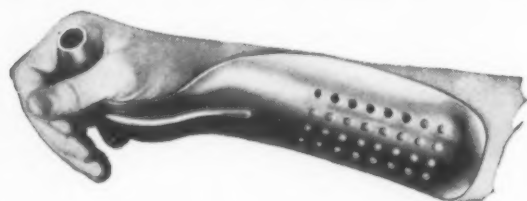
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When the Douglass, Kansas, High School replaced a fan blast system, which was not providing proper heating, with a Dunham Differential Vacuum Heating System, the School Board not only made a change which is giving perfect satisfaction, but also effected a saving of 37% in the fuel bills.

In his letter to the manager of our Wichita Office, Mr. E. Floyd Greer, Superintendent of the Douglass Public Schools, writing under date of May 7, 1928, stated: "I am enclosing herewith our annual report submitted to the patrons of our school district relative to the expenditures for the fiscal year. You will notice in the bottom of this report an item that may be of particular interest to you, which indicates the increase in efficiency of our heating plant. I wish to say that we have been highly pleased with the Dunham specialties in connection with our heating system . . . The tem-

perature throughout the whole building can be maintained quite closely without the regulating of the fire at all times. As you will notice, its first year of operation has caused a decrease of 37% in fuel consumption, and this report is made in view of the fact that the winter just passed has required considerably more heat than that of last year. There may be heating systems as good as this, but we are entirely satisfied with the operation of this one, and, as we make further additions to our building, a Dunham heating system will surely be stipulated in the contract."

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BENCHES



FIG. 732—"HALLOWELL" WORK-BENCH OF STEEL THROUGHOUT



Pat'd and Pats. Pend'g
FIG. 926—"HALLOWELL" WORK-BENCH WITH AN ALL LAMINATED WOOD TOP AND SHELF BELOW.

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Vocational Training Benches

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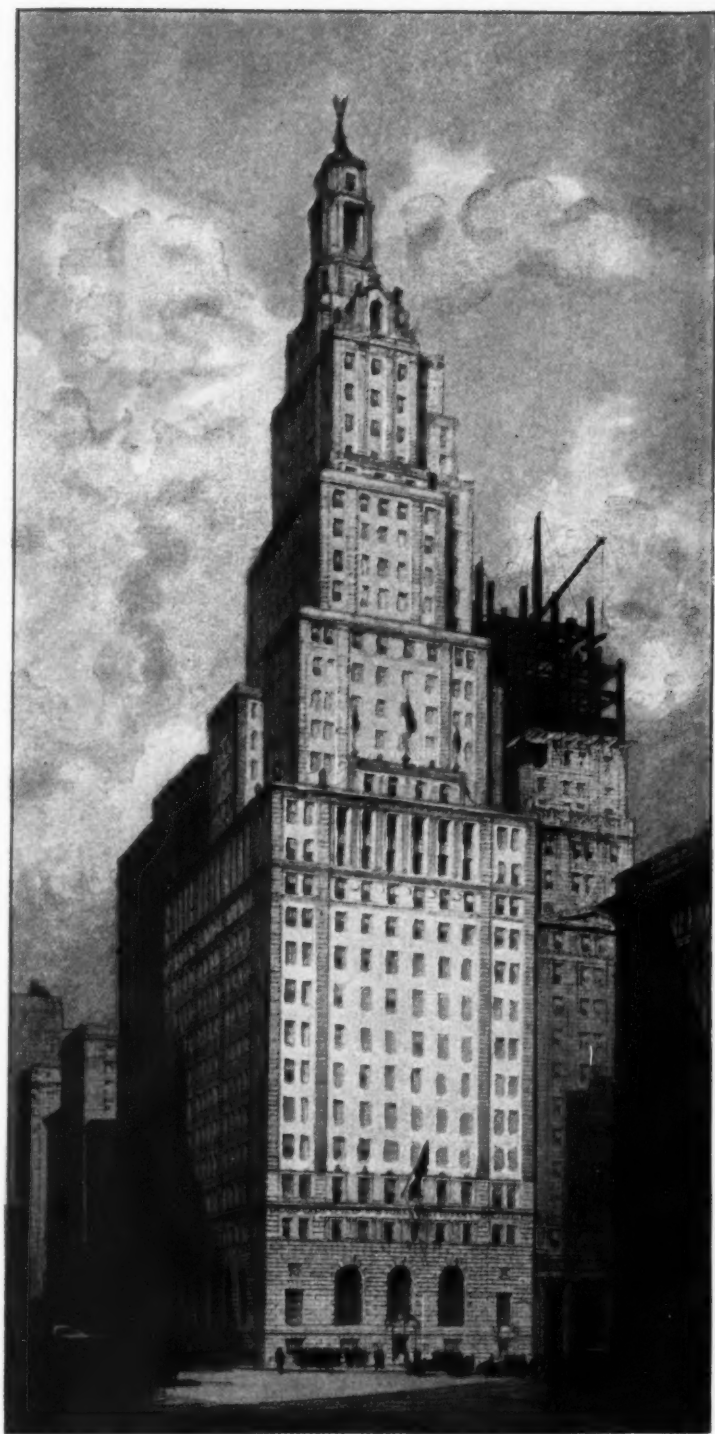
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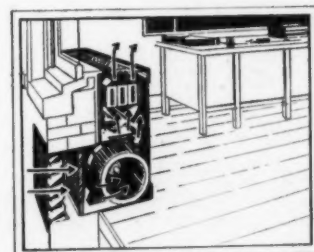
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The Modern Hair Drier

Hand ⁱⁿ Hand with **HEALTH and SANITATION**

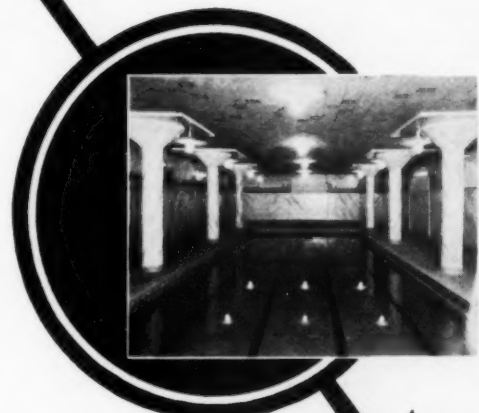


And here is the beautiful swimming tank in the Elk's Temple, where the many members benefit from the Sani-Dri Hair Drier at the finish of each swim.

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WHAM Rochester	WFAA Dallas
WOAI San Antonio	KPRG Houston
WSMB New Orleans	WJAX Jacksonville
WHAS Louisville	WHO Des Moines
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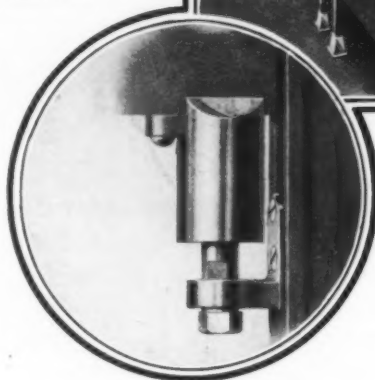
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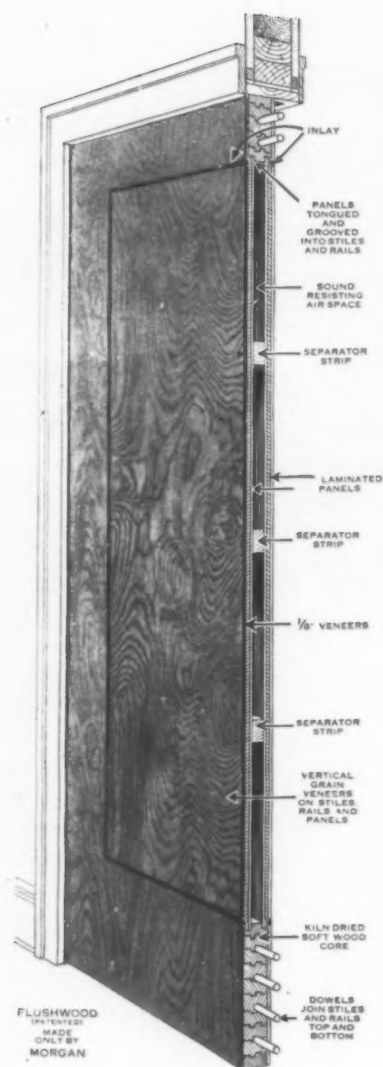
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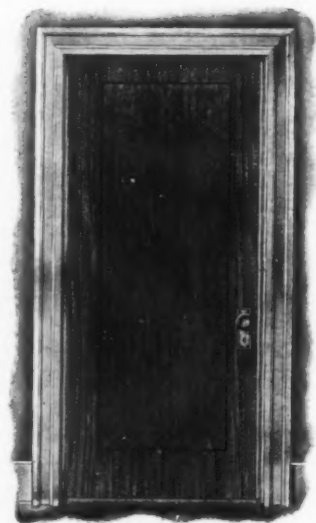
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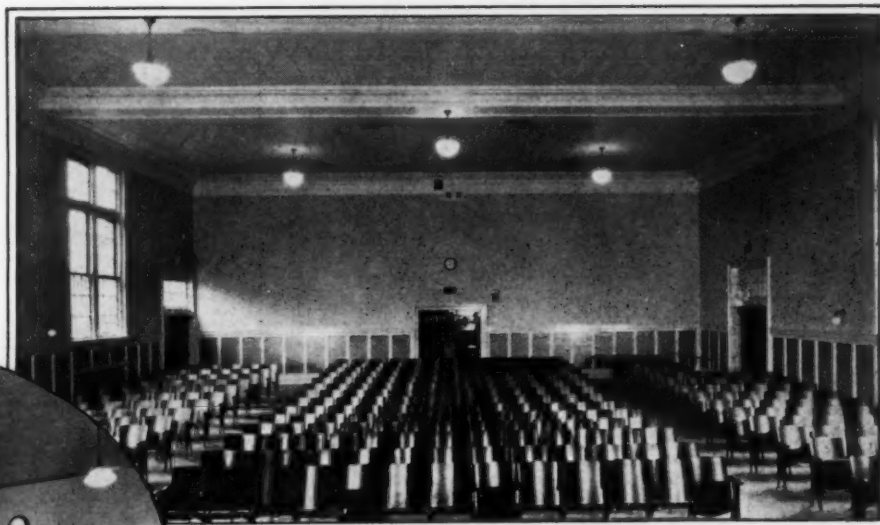
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George H. Jones, architect for Portland Public Schools, is an enthusiastic advocate of Acousti-Celotex. He specified it for all the interiors shown here.

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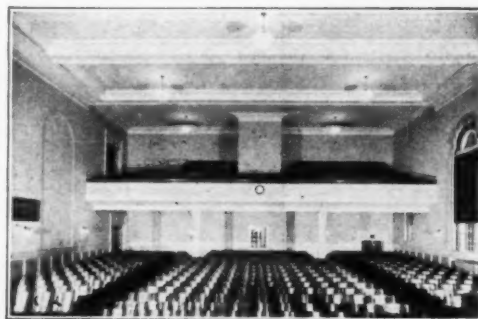
Less noise—better hearing—

better conditions for teaching and studying—here are the things school all over the country are obtaining with Acousti-Celotex. In your own school this material will make entertainments and assemblies

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Gentlemen: I would like to know more about Acousti-Celotex. Please send me your booklet, "Less Noise—Better Hearing."

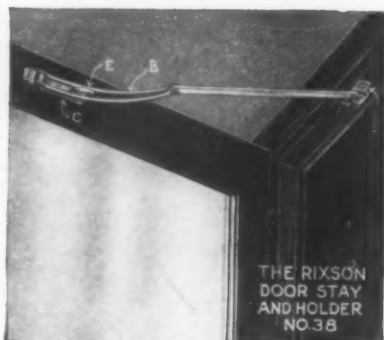
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Address

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of
Marching
Children



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Door
Stay
and
Holder

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detailed in-
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An interesting booklet packed full of brass tack information on school and institution cleaning is available to every school superintendent. Drop us a line and your copy will be gladly sent by return mail without obligation on your part; or write for our Service Man in your locality to call and go over your cleaning problems with you.

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Oakite Service Men, cleaning specialists, are located at

Albany, N. Y.; Allentown, Pa.; *Atlanta, Ala.; Baltimore, Md.; Boston, Bridgeport, Brooklyn, N. Y.; Buffalo, *Camden, N. J.; Canton, O.; Charlotte, N. C.; Chattanooga, Tenn.; *Chicago, *Cincinnati, *Cleveland, *Columbus, O.; *Dallas, *Davenport, *Dayton, O.; *Decatur, Ill.; *Denver, *Des Moines, *Detroit, Erie, Pa.; Fall River, Mass.; Flint, Mich.; Fresno, Cal.; *Grand Rapids, Mich.; Harrisburg, Pa.; Hartford, *Houston, Texas; *Indianapolis, *Jacksonville, Fla.; *Kansas City, Mo.; *Los Angeles, Louisville, Ky.; Madison, Wis.; *Memphis, Tenn.; *Milwaukee, *Minneapolis, *Moline, Ill.; *Montreal, Newark, N. J.; Newburgh, N. Y.; New Haven, *New York, *Oakland, Cal.; *Omaha, Neb.; Oshkosh, Wis.; *Philadelphia, Phoenix, Ariz.; *Pittsburgh, Pleasantville, N. Y.; Portland, Me.; *Portland, Ore.; Poughkeepsie, N. Y.; Providence, Reading, Pa.; Richmond, Va.; *Rochester, N. Y.; Rockford, Ill.; *Rock Island, Sacramento, Cal.; *San Francisco, *Seattle, South Bend, Ind.; Springfield, Mass.; *St. Louis, *St. Paul, Syracuse, N. Y.; Toledo, *Toronto, Trenton, *Tulsa, Okla.; Utica, N. Y.; *Vancouver, B. C.; Waterbury, Conn.; Wichita, Kan.; Williamsport, Pa.; Worcester, Mass.

*Stocks of Oakite materials are carried in these cities

OAKITE

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Industrial Cleaning Materials and Methods



if microbes had skates

If microbes could skate what fun they would have on floors of W. & J. Sloane Linoleum. Even from a microboscopic viewpoint W. & J. Sloane Linoleum is smooth as a mill pond—as level as a Kansas prairie.

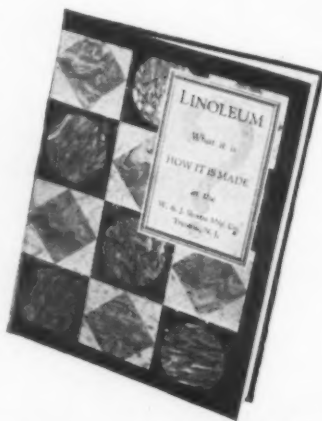
But being limited to the method of locomotion with which Nature has endowed them, these tiny disease spreaders avoid W. & J. Sloane Linoleum as they do a barrage of formaldehyde. Too much danger of broken necks! No nice cracks or caves to hide in!

One of the surest ways to make a school building unpopular with germs is to

cover its floors with W. & J. Sloane Linoleum. Extra grinding of ingredients plus 32% extra pressure in the calender rolls gives it a naturally smooth, uniform surface without cracks and crevices.

This extra processing not only makes a more sanitary floor but also decreases maintenance cost.

School officers and members of school boards will find information of value in our book: "How Linoleum is Made in the W. & J. Sloane Plant." We will gladly send you a copy on request. W. & J. Sloane Mfg. Co., Trenton, N. J.



This book will show you why floors of W. & J. Sloane Linoleum are sanitary. Write for free copy. Advertising Department, W. & J. Sloane, 557 Fifth Avenue, New York City.

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The NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO
THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

VOLUME III

MARCH, 1929

NUMBER 3

How a Research Department May Aid a Bond Campaign

*An outline of the possibilities inherent in graphic
presentation of statistics, illustrating an ef-
fective form of service sometimes overlooked*

BY CHARLES R. TUPPER, ASSISTANT SUPERINTENDENT, SAN DIEGO CITY SCHOOLS, SAN DIEGO, CALIF.

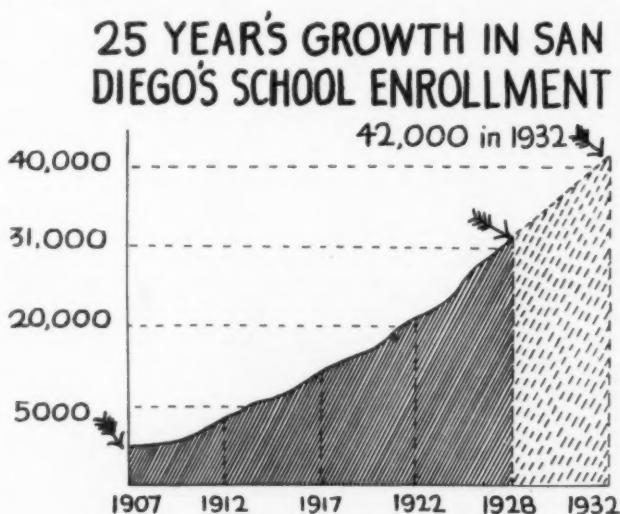
POPULAR opinion commonly associates the research department of a school with activities of testing and measuring, with the development of curricular materials and with various studies of an academic nature. These are all legitimate and important functions of a research department but there are also certain practical administrative aids that such a department can render and that should not be overlooked.

In the development of financial policies, building programs and bond campaigns the research

campaign that was authorized in San Diego by a vote of five to one after having been defeated the previous year, offers an illustration of ways in which the research department may be of assistance in campaigns of this nature.

San Diego is a rapidly growing Californian city of 150,000 population. Its recent unprecedented growth has created a serious shortage in school building accommodations. Two years ago school officials, foreseeing the impending congestion, worked out a comprehensive building program and went before the people for authorization of a bond issue, only to have it turned down. The load upon the buildings continued to increase and the overcrowding was fast becoming intolerable. With the prospect of numerous half-day sessions and the use of temporary shacks staring them in the face, school officials immediately laid plans for bringing the question of a bond issue again before the people.

A careful review of building needs was made by the superintendent with the assistance of building principals and through the cooperation of the various parent-teacher associations. Based upon these studies a carefully planned and comprehensive bond budget of \$2,313,000 was drawn up and plans were laid for an intensive publicity campaign to extend over a period of six weeks. Under this plan, four main avenues of approach to public opinion were designated—the press, the theater, a public speakers' bureau and a series of



Graph 1. Growth in school enrollment.

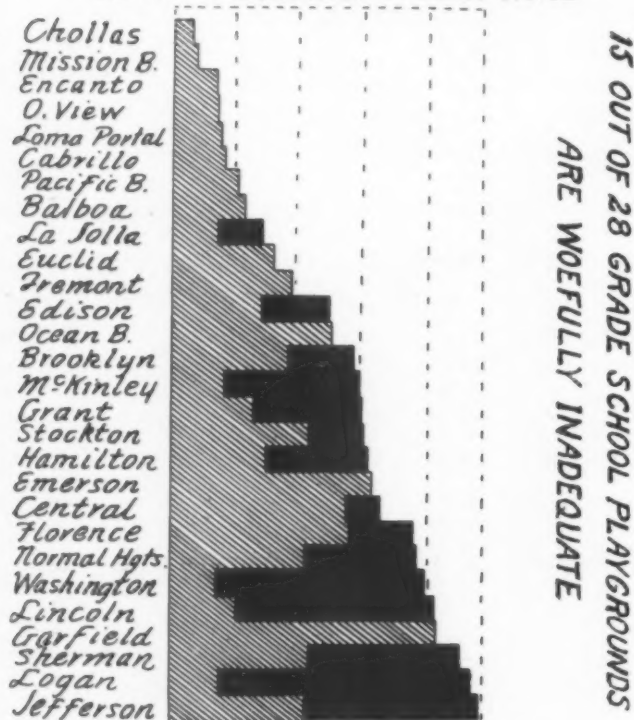
department can often render valuable and effective service. The recent two million dollar bond

six pamphlets to be distributed to all homes in the city through the school children.

Responsibility for each of these activities was centered in one individual. News articles and paid advertisements were placed in charge of a professional publicity agent employed for the purpose; theater slides, posters, photographs and motion picture glimpses of the schools were assigned to the visual education department; the speakers' bureau was delegated to one of the assistant superintendents and the preparation of the pamphlet series was undertaken by the superintendent himself.

At this point the research department was called upon to assemble facts pertaining to school conditions and school needs and to organize them

HALF THE GRADE SCHOOLS HAVE A SERIOUS SHORTAGE OF PLAY SPACE



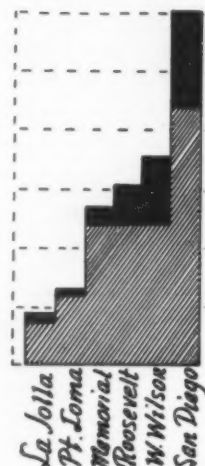
THE BLACK SPACES SHOW THE SHORTAGE OF PLAY SPACE IN VARIOUS GRADE BLOC.

Graph 3. Shortage of play space in the schools.

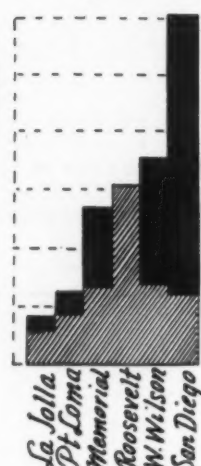
into forms suitable for effective publicity. Certain criteria were set up as guides in selecting the material to be used. First, it must be simple and convincing in order that the uninitiated layman might easily grasp the meaning. Second, the story must be concise, graphic and quickly told, so that passing attention might be quickened into interest and thoughtful consideration. Third, the material must be logical and sequential, leading up to an inclination to act. Finally, the facts presented must recognize and counteract certain antagonistic beliefs and impressions.

The defeat of the bond issue of the preceding

Overcrowded Buildings



Overcrowded Playgrounds

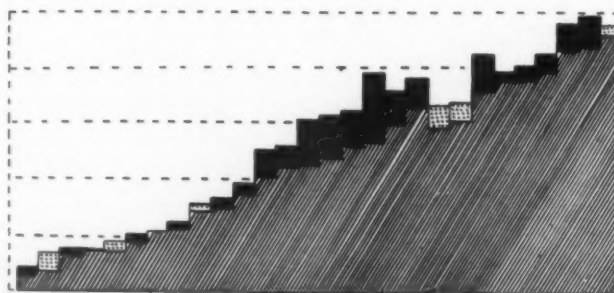


Graph 4. Overcrowded conditions in the high schools.

year had been ascribed, first, to the active influence of that conservative element found in every community which is always interested in curtailing all forms of public expenditure involving taxation, and, second, to the inertia of those friends of the schools who had failed to vote. The publicity material for the impending bond campaign was therefore selected with a view to its ability to develop public consciousness of the existence of a crisis in the affairs of the schools, conviction of ability to provide needed facilities and confidence in the financial management of the schools.

From the mass of material assembled certain facts were selected as meeting these requirements. This material was then worked over into a graphic form suitable for public display. From these graphs, sets of slides were made and run in all theaters in the city. These graphs also appeared in the news columns of local papers in connection with articles prepared by the publicity agent and were later run in the commercial

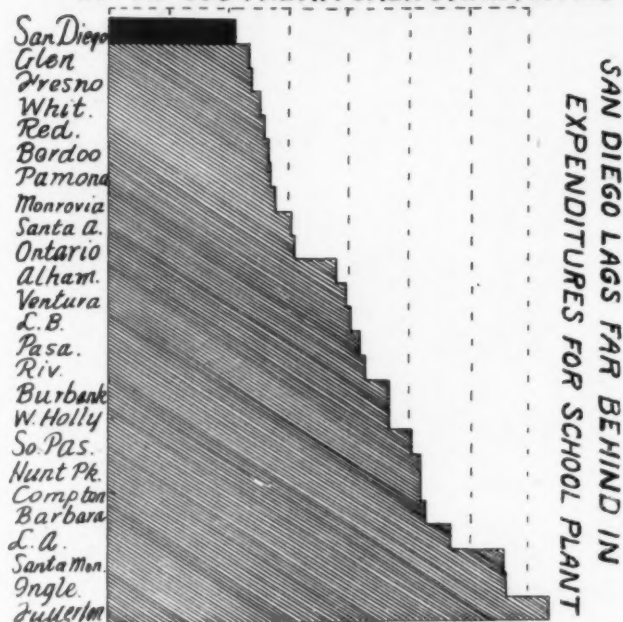
20 OUT OF 28 GRADE SCHOOLS ARE OVERCROWDED.



The black spaces show the overcrowding of San Diego's various grade schools

Graph 2. Overcrowded conditions in the schools.

VALUE OF SCHOOL PLANT PER CHILD OF 25 SOUTHERN CALIFORNIA CITIES



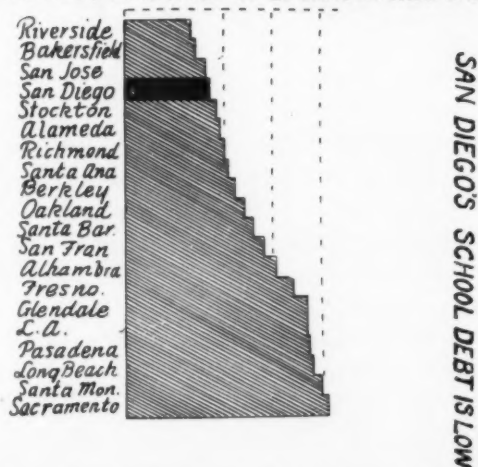
Graph 6. Value of school plant per child in twenty-five California cities.

columns as paid advertisements. Enlarged sets of the graphs were used by the staff of the speakers' bureau in 154 ten-minute addresses, which were delivered before some 43,000 people assembled in the lodges, luncheon clubs and various social and business organizations of the city. Selected graphs from the series became the nucleus of four of the six bond pamphlets that were distributed to every home by the school children.

The graphs finally selected by the administration to help tell this story of the city's need are shown here, with a brief summary of their purpose and the arguments used.

Graph 1: The purpose of this graph was to show the taxpayer the basis upon which future

SCHOOL DEBT PER CHILD OF 20 LARGER CALIFORNIA CITIES



Graph 7. Outstanding school debt per child in twenty California cities.

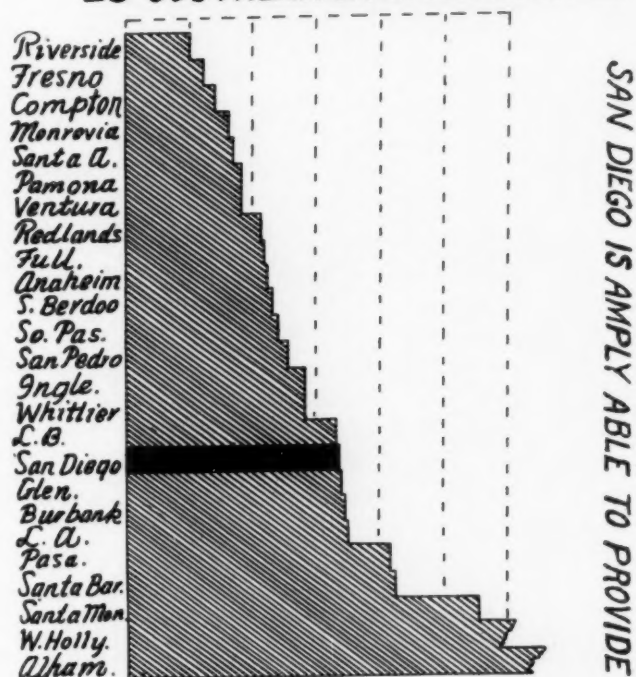
needs are estimated and to establish the consciousness of stable and sure development of the community in spite of possible fluctuations in individual years. Through this graph it was hoped that a definite impression might be created of steady irresistible growth, which must be provided for by additional buildings at stated intervals.

Arguments Advanced: The history of the past twenty years reveals an irresistible and steady increase in school enrollment. The story portrayed characterizes the city as a rapidly and soundly developing community and safely forecasts the conservative increase estimated for the next five years.

The average annual growth for the past five years, which amounts to 2,000 pupils a year, represents a need of fifty-five to sixty additional classrooms a year to care for normal growth.

But—no additional classrooms have been built

WEALTH PER SCHOOL CHILD OF 25 SOUTHERN CALIFORNIA CITIES



Graph 5. Taxable wealth per school child in twenty-five California cities.

for more than two years. The consequences of this neglect are pictured in Graph 2. The purpose of this graph was to acquaint the taxpayer with the overcrowded conditions in the schools and to demonstrate the fact that the condition was a general one which could not be relieved by modification of boundaries between schools. This graph also supplied a general idea of the number of the schools in the city and the wide variation in their size. Its primary purpose was to establish the conviction that an immediate need existed.

Arguments Advanced: San Diego's elementary schools are arranged here side by side, according to pupil enrollment. The relative overcrowding of the respective buildings is shown in black. The situation pictured represents an immediate need for thirty-seven additional classrooms to relieve the overcrowded condition, not taking into account the additional rooms needed to care for normal increase next year and the year after. No funds are available to supply these classrooms until San Diego citizens authorize a bond issue for their construction. This graph tells only half the story. Graph 3 completes the story and reveals the full significance of the situation the community is facing.

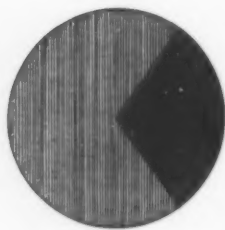
Need for Playgrounds Stressed

Graph 3: The purpose here was to fix more firmly the impression of immediate and urgent need introduced through Graph 2. The elementary schools of the city are again arrayed side by side according to pupil enrollment. The percentage of children provided for by existing playgrounds, on the basis of a minimum of 100 square feet per child, has been calculated, and the percentage of children in each building not provided for is stressed in black. The fact that all but two of the larger schools fall far short of standard requirements stands out strongly.

Arguments Advanced: San Diego's playgrounds are woefully inadequate. Fifteen out of twenty-eight elementary buildings have grounds far too small to provide necessary play activity. Healthy happy children cannot be developed without adequate exercise and suitable play space. Under present conditions San Diego's children cannot hope to have the full amount of healthful play and exercise essential to their wholesome and complete physical development.

Graph 4: The purpose of this graph was to re-

SAN DIEGO SCHOOLS RECEIVE ONLY 30¢ OF THE TAX \$.



San Diego residents
paid in City & County
taxes in 1927-

\$ 7,114,040.

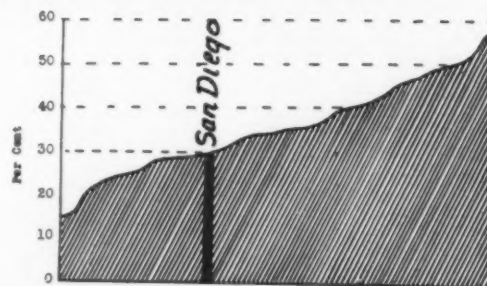
City Schools received
from this amount-

\$ 2,130,000.

OR 30%

Graph 8. The school's share of the tax dollar.

SAN DIEGO SCHOOLS RECEIVE A SMALLER THAN AVERAGE SHARE OF THE TAX \$



This shows the schools share of
tax receipts for 50 U.S. Cities
of San Diego's Population.

Graph 9. The school's share of the tax dollar in fifty comparable United States cities.

inforce the impressions presented through Graphs 2 and 3, and to crystallize the conviction of urgent and immediate need in the schools.

Argument Advanced: The overcrowding of school buildings and the inadequacy of playgrounds are creating a critical situation in the elementary schools. The situation in the high schools is even more serious, as may be seen from the relative size of the black areas of this graph.

The school board is deeply concerned over the situation revealed, but it can do nothing without the approval of the voters. The board therefore brings the problem before the community once again, confident that once the true condition is realized a remedy will be found through the authorization of the bond issue asked for.

The comparative ability of the community to provide the needed facilities may be judged from Graph 5. This graph was designed to counteract a more or less general feeling that the city is considerably below average in taxable wealth. This opinion arises from the fact that the assessment ratio in San Diego is the lowest in the state. Assessed per capita wealth is therefore low, but in real wealth the community ranks considerably above the average. Attention was particularly called to Long Beach, which appears next to San Diego in wealth, and to Fresno which is next to lowest among the cities shown. These cities were selected for comparison when referring to the next graph on valuation of school plant.

Arguments Advanced: San Diego has more than average wealth per school child as compared with other Southern California cities. She can well afford adequate school buildings and the necessary play space for her children.

The degree to which the city has actually met

these needs, as indicated by the present investment in school plant, is seen in Graph 6. The purpose here was to bring home as forcibly as possible the fact that San Diego had fallen far behind other cities in investment in school plants, and that her relative position among the cities showed no correspondence to her relative position among the same cities with regard to taxable wealth. The general aim was to arouse a feeling of exasperation and dissatisfaction over the condition shown and to quicken a determination to remove the blot upon the reputation of the city.

Attention was called to the central position of Long Beach in this series, which was shown in Graph 5 to have the same per capita wealth as San Diego. Fresno was also pointed out as having provided more liberally for its children than San Diego, in spite of the fact that Graph 5 showed Fresno as next to the lowest among the cities in wealth.

Argument Advanced: San Diego has more than average wealth per child as compared with twenty-five larger Californian cities, but in terms of value of school plant actually provided for her children, she has been more niggardly than any of these cities. Cities with one third San Diego's wealth are providing more liberally for their children than San Diego has done, while cities with approximately the same wealth have made investments for housing their schools that are twice as great as San Diego's.

Stressing the Importance of the Situation

This unfavorable condition prevails not because of lack of consideration for the children of the community, not from lack of ability to provide but from lack of realization of the seriousness of the situation. Once informed, San Diego's citizens will not be found lacking in action.

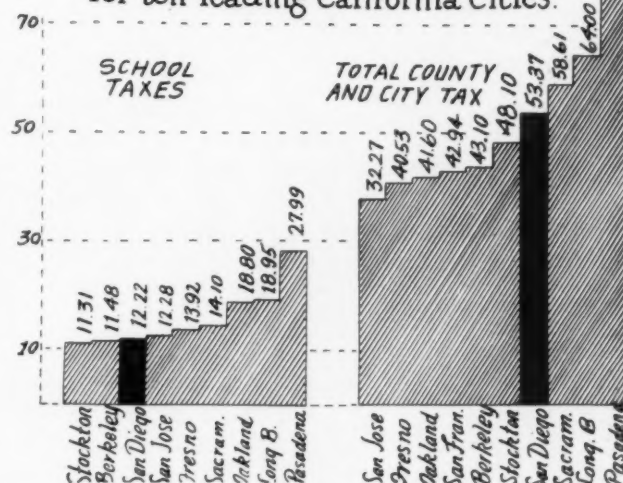
The present needs of the schools can be adequately met only through authorization of the bond issue asked for. Whether or not the voting of such an issue would unduly burden the community with debt can be ascertained from Graph 7. The purpose of this graph was, first, to combat the widely prevalent impression that the schools were already heavily in debt. A second purpose was to contribute to the establishment of confidence in the school administration by showing that the schools had been conservative in the matter of debt in the past.

Argument Advanced: San Diego has a low outstanding school debt per child and can safely assume the added burden represented by the bonds asked for. San Diego's schools have been cautious about creating debt in the past, and the added burden of the new issue will still leave the per

capita debt below average for the cities of the state. The extent of which the schools are already a burden upon the taxpayers of the community may be seen from Graphs 8 and 9.

Graphs 8 and 9: A report had previously been circulated in the community to the effect that 60 cents of each tax dollar went to the schools. As a result, considerable feeling existed that an activity that already absorbed the biggest part of the taxes should be able to get along with what it had. This report was based upon the fact that 60 cents of the county tax dollar went to schools, but in these calculations the city taxes had not been taken into consideration. The purpose of these two charts, therefore, was to counteract this impression by demonstrating, first, that only one third, or a minor portion of taxes was due to schools, and, second, that the share of the tax dollar asked for by local schools was moderate as

SAN DIEGO'S SCHOOL TAX IS LOW. This Graph shows the per capita tax for ten leading California Cities.



Graph 10. Per capita taxes in larger California cities. compared with fifty cities of similar size scattered throughout the country.

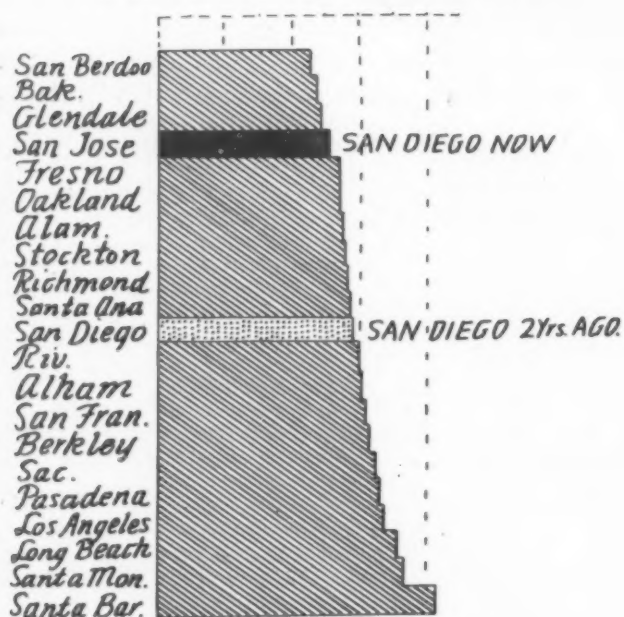
Argument Advanced: Schools are one of the largest and most important activities in any American community and their share of tax funds always ranks high among the tax supported activities of a city. San Diego schools have been moderate in their demands upon the taxpayer. Less than one-third of the taxes paid by the local community goes to the schools, and this share ranks far below average as compared with fifty United States cities of San Diego's size.

An additional measure of tax burdens within the city as shown by per capita school, and per capita total taxes, is supplied through Graph 10. A strong feeling prevailed in San Diego that taxes were unusually and exorbitantly high. This feeling was supported by the fact that tax rates were

very high, a fact partially due to the unusually low assessment ratio used. This graph was not intended to deny the existence of high per capita taxes, but it did attempt to modify this impression, first, by showing that per capita taxes were but little above average and considerably below the taxes carried by some of the other cities of the state. Second, by showing that the per capita school taxes were decidedly moderate as compared with school taxes for the other cities shown.

Argument Advanced: San Diego's total per capita tax is a little above average for the

SAN DIEGO SCHOOLS ARE RUN ECONOMICALLY



This shows the school
cost per child for 20
larger California cities.

Graph 11. Per capita operating costs in California schools.

ten largest cities in the state but is considerably below the per capita tax carried by at least three of the larger cities. School taxes per capita in San Diego are well below average indicating that local schools have been unusually moderate in their tax demands.

The economy or lack of economy exercised by school authorities in their expenditures of tax funds turned over to them may usually be judged by the per capita cost of operation. Whether or not San Diego schools have been conservative in their expenditures may be judged from Graph 11. The purpose of this graph was to fix more firmly in the mind of the taxpayer the impression of the economy practiced by school officials in the use of public funds, and through this to develop a feeling of confidence in the school administration.

Argument Advanced: San Diego schools are economically run. Expenditures per child two years ago were average as compared with the larger cities of the state; last year they were close to the bottom, this year they are lower still.

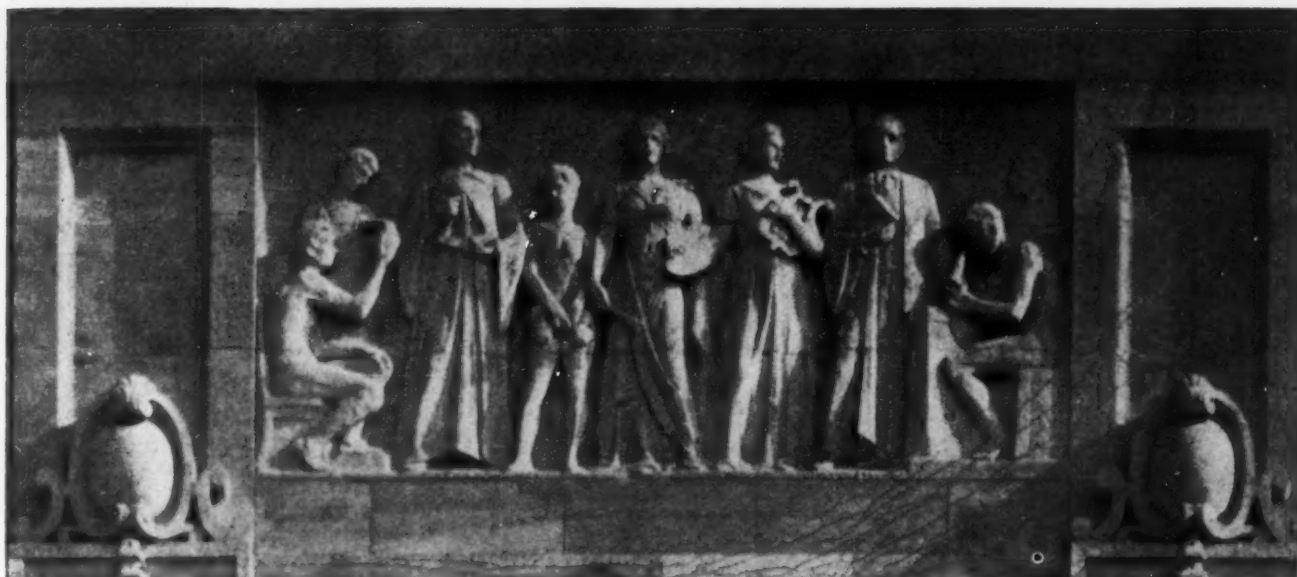
The foregoing graphs appear simple and easy to make, yet back of them are several weeks of investigation and tabulation of statistics. Each graph is the picture of a detailed investigation and in their apparent simplicity lies their strength. With but few words of explanation supplemented by a running story, similar to the arguments indicated, the speakers and writers of the campaign were able to place intelligently before all types of audiences a convincing story of the city's need with the result that a \$2,313,000 bond issue was carried five to one, after having been defeated the previous year.

Protecting the Schools Against Propaganda

A committee of ten has been appointed by Uel W. Lamkin, president, National Education Association, to investigate the use of material in schools provided by outside agencies or organizations.

The purpose of the committee will be to study the question of how schools may bring themselves into closer touch with every-day life through proper use of the vast amount of material various organizations and agencies now have available for school use. The committee will also state the principles which should guide school officials and teachers in using such material so that children may be protected from onesided viewpoints and from exploitation for commercial advertising purposes. The committee will study the question as it concerns all schools and all business and educational organizations rather than confine itself to particular institutions or organizations.

Members of the committee are: E. C. Broome, superintendent, Philadelphia schools, chairman; Frank W. Ballou, superintendent, Washington schools, Washington, D. C.; Cornelia S. Adair; Eva J. Pinkston, Dallas, president, department of elementary-school principals; J. Stevens Kadesch, Medford, Mass., president, department of secondary-school principals; C. E. Partch, dean, school of education, Rutgers University; L. A. Pittenger, president, Ball Teachers College; A. T. Allen, state superintendent of education, North Carolina; David A. Ward, superintendent of schools, Wilmington, Del.; Paul C. Stetson, superintendent of schools, Dayton, Ohio.



Illustrations by courtesy of William B. Ittner, architect, St. Louis.
Detail of panel over the main entrance of the front pavilion, Central High School, Washington, D. C.

Adapting Architectural Precedent to American School Design

Tudor, Georgian and Colonial styles lend themselves admirably to the creation of buildings adequate alike to the enriched curriculum and to the demands of superintendents for stylistic unity and beauty in school structures

By EMILY GRANT HUTCHINGS, ART EDITOR, *St. Louis Globe-Democrat*, ST. LOUIS

A SCHOOL building is not primarily a warehouse in which certain packages of learning are stored, to be handed out unopened to pupils of all ages who regard education as one of the unavoidable evils of youth.

The present century has seen this old idea practically wiped out, not so much by the change in curriculum as by the altered type of the school itself. An impressive building in well kept grounds is a powerful stimulant to youthful pride, giving the pupil the feeling that the school belongs to him and establishing a standard to which his whole life must be adjusted.

The change in this important standard is due in very large measure to the intelligent interest of school superintendents and to their demand not only for a workable interior but for architectural excellence. Such monstrosities as were constructed a few years ago cannot now reappear except in instances where the superintendent's wishes are ignored, or where the contract falls into incompetent hands. To-day, in large and small communities alike, the school buildings rank as the best examples of civic architecture.

In general, the controlling elements to good architecture are a well developed plan, an understanding of precedent and a correct use of building materials. The first and most important of these is a good plan. If the plan evidences a complete understanding of school requirements together with a sense of relationship and balance, the exterior will be successful. An involved, badly thought out plan usually results in a mediocre exterior.

Fitting the School to the Environment

It is fortunate that, due to the open plan and to the diversification of the educational content of schools brought about by curriculum enrichment, the school building field has attracted architects of superior training and wide experience. The requirements of the expanded curriculum have made necessary an exhaustive study of the school building problem by architects of genuine ability. No present day school building project can be mastered by an amateur in the profession.

The second element, a thorough knowledge of the world's masterpieces in architecture, is the



The Wyman Elementary School, St. Louis, which is built in Tudor Gothic style of architecture.

salvation of the school designer whose instinct for the beautiful and the appropriate is augmented by common sense and good taste. He may draw at will on all the glories of the past, so long as he adheres to stylistic unity and keeps in mind both the purpose of the building and its physical and social environment. A highly ornate school in a slum neighborhood is as much out of place as a stucco building in the frozen North or a manifestation of Colonial simplicity in a neighborhood devoted to the bungalow style of overdressed residences.

In this day of modernistic revolt against precedent, a word should be said concerning the new recessed type of public building. That type loses all meaning for the average school which is rarely more than three stories high. In a low building its massive effect becomes mere stolid heaviness and the need for light and air, which was responsible for the creation of the recessed skyscraper, is met far more easily in the Colonial, the Tudor or the Georgian structure, which grew out of the open plan arrangement of classrooms.

When the old dumb-bell school, with its packing house exterior, was superseded some twenty years ago by the building that was called upon to house an enriched curriculum, the architecture developed in England under Eliza-

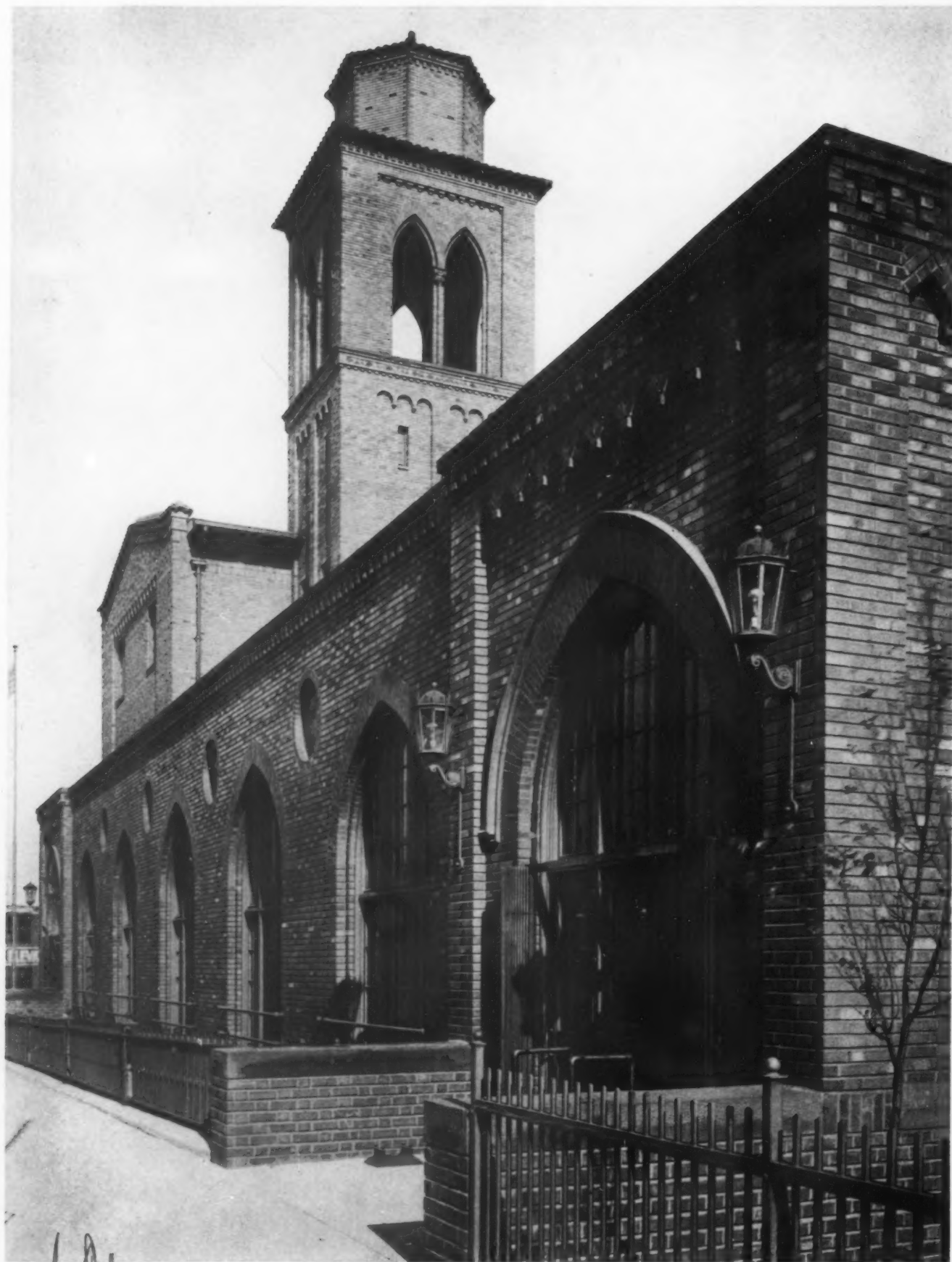
beth, Charles II and the Georges, and after them, in the American colonies, was found to be admirably adapted to the radically changed interior. One of the first highly successful schools of this new character was the Wyman Elementary School, St. Louis, built by William B. Ittner, at that time architect for the St. Louis Board of Education. Here the merging of Tudor with the earlier Gothic is admirably shown in a structure almost entirely of brick. The fame of this school had much to do with focusing the attention of other school architects on the public and domestic architecture of seventeenth and eighteenth century England.

Other modifications of Tudor are to be found in the Bryan Hill Elementary School, St. Louis, which follows the design of domestic architecture developed during the reign of Henry VIII, and in the Central High School, Washington, D. C., where the highly embellished façade of the main entrance preserves a feeling that is almost classical. The Georgian style, growing naturally out of the Tudor, is revealed in two of its extremes in the Laclede Elementary School, St. Louis, and in the Central High School, Minneapolis, both of which show the possibilities of brick with a greater or lesser embellishment of cut stone.

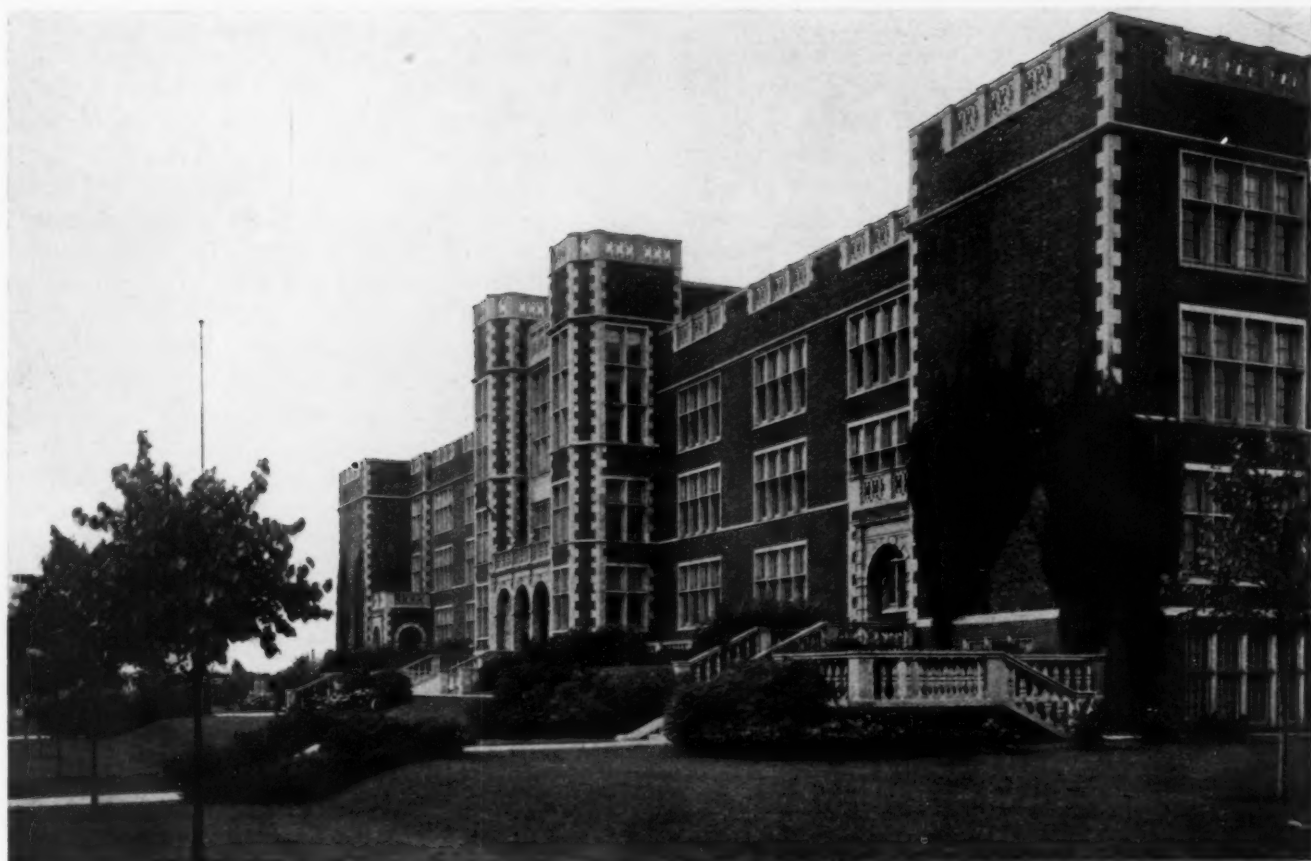
Colonial architecture need not be limited to the



An attractive Colonial design was chosen for Mt. Auburn Elementary School, Dallas, Tex.



Humbolt Elementary School, St. Louis, shows an adaptation of the Italian Gothic type of architecture.



Here are shown two schools whose architecture is adapted from past ages. Above is the Central High School, Minneapolis, which is of the early Georgian type. Below is the Bryan Hill Elementary School, St. Louis, which is designed from the domestic architecture of the Tudor period.



Atlantic states, either logically or practically, since that which came into being in the American colonies is the heritage of the entire country. An excellent example of early Colonial is to be found in the Maple Avenue Elementary School, Niagara Falls, N. Y., and an elaboration of this style, with beautiful texture in the brick paneling, is shown in the Mt. Auburn School, Dallas, Texas. In the Robert A. Long School, Longview, Wash., every requirement of Colonial tradition has been observed.

Among other architectural achievements are several that have gone outside the confines of one historic style to bring about an effect at once decorative and satisfactory. To this class belongs the

effects have been obtained in stucco construction with Spanish Mission design, an example of which is to be found in the Goliad Elementary School, Galveston, Texas. When this style and material are used in the northern states the effect is not only incongruous but is unsatisfactory.

For the country at large, the most satisfactory material is brick, a hideous material in the hands of an amateur architect but a highly responsive one when it is selected and adapted by a master of design. In many buildings the beauty of effect is due entirely to the perfect proportion of windows to the intervening wall spaces.

To one whose teaching experience twenty years ago was endured in a high school of the old dumb-



The Laclede Elementary School, St. Louis, is built in the style of the later Georgian period.

Rose Fanning Elementary School, St. Louis, in which Italian motifs are freely used, and the Humbolt School, St. Louis, with its interesting adaptation of the Gothic, a treatment for which there is ample precedent in northern Italy.

The third, and in some respects the most vital consideration, is that of material, its cost and its adaptability to school needs. Those who were nurtured on the classics think first of Ionic dignity. Such a building is the Central High School, Columbus, Ohio. But there is only one material in which a classical building can be carried out fittingly, and that is stone. For the American cities, in general, this construction is entirely too costly. In many of the southern cities charming

bell type, this quest of the perfect school has become a fascinating pursuit. I found it first in the pioneer work of William B. Ittner, whose Wyman School, erected in 1900, had settled into the background of tradition when I saw it first in 1910. Since that time I have found it in scores of schools planned by equally competent architects in every quarter of the United States. If the standard of American taste has been elevated perceptibly since the beginning of the present century, that elevation may be attributed in large measure to the influence of good school architecture not only on impressionable children but on parents whose judgment is modified by daily contact with that which is both authentic and fine.

How School Planning Reveals the Trend of the Curriculum

An analysis of space provisions in high-school plans showing that the phases of teaching receiving increasing attention are those that offer training in vocations, health and social developments

By C. G. SHAMBAUGH, GRADUATE STUDENT, STANFORD UNIVERSITY, STANFORD UNIVERSITY, CALIF.

IN CONSTRUCTING a factory for the manufacture of goods the builder has in mind a definite kind of finished product. Any change in the finished commodity calls for a variation in method and equipment. Likewise in planning a school building one should be guided by a carefully arranged definite educational program. The purpose of this analysis of space provisions in floor plans is to show the number and kind of space provisions, the increase in their number in the last decade and the shifting of emphasis in

the curriculum and school program as indicated by the floor plans.

The data treated in this study are taken from fifty-eight floor plans that were reproduced in Volumes 72 to 77, inclusive, of the *American School Board Journal*, covering the years 1926, 1927 and 1928. These fifty-eight plans do not include all that were reproduced since some were omitted because of indistinct lettering or incompleteness of plan. The junior high-school plans were not included among those considered.

TABLE II—KINDS OF SPACE PROVISIONS THAT APPEARED ONLY DURING 1926-28 IN FLOOR PLANS OF HIGH SCHOOLS IN COMMUNITIES OF 10,000 OR MORE

	Per Cent		Per Cent
110 Boys' student activity room	10.0	150 Library study room	36.7
111 Girls' student activity room	10.0	151 Library office	10.0
112 Auditorium and gymnasium*	6.7	152 Library classroom	10.0
113 Stage storeroom*	30.0	153 Library conference room	6.7
114 Boys' shower room* ²	66.7	154 Picture room	26.7
115 Girls' shower room*	66.7	155 Supply room freehand drawing	10.0
116 Gymnasium supply room*	43.3	156 Museum	6.7
117 Boys' rest room	13.3	157 Cafeteria*	50.0
118 Visiting team's room*	10.0	158 Dishwashing room	16.7
119 Girls' team room	6.7	159 Dietitian's room	10.0
120 Boys' team room	6.7	160 Auto shop	36.7
121 Drying room for gymnasium	13.3	161 Drafting room*	23.3
122 Medical examination room	20.0	162 Radio room	10.0
123 Nurses' room*	23.3	163 Blueprint room	16.7
124 Clinic*	23.3	164 Pattern room	6.7
125 Girls' clinic	10.0	165 Shops not classified	10.0
126 Boys' clinic	10.0	166 Shop instructor's room	10.0
127 Clinic waiting room	16.7	167 Superintendent's office*	30.0
128 Corrective gymnasium	10.0	168 Principal's private office*	23.3
129 Boys' corrective gymnasium	6.7	169 Administration office	20.0
130 Girls' corrective gymnasium	10.0	170 Secretary's room*	23.3
131 Doctor's room	10.0	171 General office*	26.7
132 Dental room*	10.0	172 Teachers' conference room	20.0
133 ROTC room	6.7	173 Women teachers' toilet*	40.0
134 ROTC storeroom	6.7	174 Men teachers' toilet*	40.0
135 Latin room	6.7	175 Board room*	10.0
136 History room	6.7	176 Clerk's room	16.7
137 English room	10.0	177 Files*	16.7
138 Mathematics room	6.7	178 Business office	10.0
139 Physics office	6.7	179 Dean's room	10.0
140 Office practice room	10.0	180 Dean of boys' room	6.7
141 Bank*	16.7	181 Dean of girls' room	6.7
142 School paper office	16.7	182 Teachers' lockers	10.0
143 Printing composing room	6.7	183 Teachers' lunch room	6.7
144 Supply room for printers	6.7	184 Motion picture room*	36.7
145 Commercial law	6.7	185 Receiving room	20.0
146 Commercial workroom	6.7	186 Janitor's toilet*	13.3
147 Commercial supply room	10.0	187 Janitresses' room	6.7
148 Commercial waiting office	6.7	188 Bookstore	6.7
149 Machine calculating room	6.7	189 Ticket office*	10.0

*Appears twice or more in high schools in communities of less than 10,000.

²Italics indicate appearance in 20 per cent or more of the floor plans of the high schools in communities of 10,000 or more.

The method of tabulation in this study is essentially the same as that used by Koos¹ in his analysis of school floor plans reproduced in the *American School Board Journal* during the decade 1908-17. For comparative purposes, I am using the data on senior high-school floor plans that Koos compiled for the years 1913-17. Since that portion of the Koos study covers a period of five years and therefore includes a larger number of floor plans than the three-year survey made in this study, the data in each study are interpreted

in terms of percentages and rank. Thus the results of these two investigations are comparable and supplementary and give a fairly accurate picture of the changes that have taken place over a ten-year period.

The 109 space provisions reported by Koos were used in this study as a beginning list for checking. Other space provisions were added as they appeared in the floor plans. Provisions for corridors, flues, vestibules, furnace rooms and coal bins were omitted as some of these may be provided for apart from the building and would not appear in all plans. In the final tabulation,

¹ Leonard V. Koos, *Space Provisions in Floor Plans of Modern High-School Buildings*, *School Review*, 27:573-99, October, 1919.

TABLE I—KINDS OF SPACE PROVISIONS, PERCENTAGES OF HIGH-SCHOOL FLOOR PLANS IN WHICH SUCH

Space Provisions for:	Communities of Less than 10,000 1913-17		Communities of 10,000 and More 1913-17		Communities of Less than 10,000 1926-28		Communities of 10,000 and More 1926-28	
	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank
1 Class and recitation rooms	100.0	1.0	100.0	2.0	97.5	1.0	100.0	2.0
2 Science rooms and labs.	22.7	33.5	32.1	32.5	10.0	83.5	16.7	91.5
3 Elementary or general science labs. ..	4.5	75.0	21.4	50.0	5.0	96.0	13.3	102.0
4 Botany labs.	4.5	75.0	3.6	96.5	20.0	56.5	20.0	80.5
5 Greenhouse or conservatory	6.8	61.5	10.7	72.5	12.5	77.5	16.7	91.5
6 Agricultural labs.	2.3	91.5	21.4	50.0	2.5	102.5	6.7	156.5
7 Zoology labs.	2.3	91.5	....	....	15.0	70.0	6.7	156.5
8 Biology labs.	11.4	46.5	32.1	32.5	55.0	23.0	60.0	23.0
9 Physiology labs. ....	....	....	....	....	12.5	77.5	....	....
10 Physiography labs.	4.5	75.0	....	....	22.5	49.5	6.7	156.5
11 Chemistry labs.	50.0	11.0	64.2	15.0	65.0	10.0	80.0	11.0
12 Physics labs.	47.7	13.5	64.2	15.0	57.5	14.5	70.0	13.0
13 Electrical labs.	4.5	75.0	7.2	84.5	7.5	89.0	40.0	43.5
14 Lecture or demonstration rooms	50.0	11.0	39.3	27.0	60.0	12.5	60.0	23.0
15 Dark rooms	27.3	26.0	32.1	32.5	32.5	34.0	26.7	65.5
16 Balance rooms .....	....	....	3.6	96.5	2.5	102.5	3.3	176.0
17 Science apparatus rooms	25.0	29.5	46.4	23.5	42.5	25.0	43.3	37.0
18 Manual training	63.6	7.0	64.2	15.0	27.5	41.5	6.7	156.5
19 Woodworking rooms or shops	9.1	52.5	21.4	50.0	20.0	56.5	36.7	52.0
20 Bench rooms or shops .....	....	....	....	....	7.5	89.0	10.0	123.0
21 Carpentry rooms or shops	4.5	75.0	....	....	15.0	70.0	10.0	123.0
22 Cabinet rooms or shops .....	....	....	....	....	12.5	77.5	6.7	156.5
23 Joinery rooms or shops* .....	....	....	....	....	....	....	....	....
24 Woodturning rooms or shops .....	....	....	....	....	17.5	63.5	....	....
25 Lathe rooms or shops .....	....	....	....	....	7.5	89.0	....	....
26 Machine rooms or shops	9.1	52.5	3.6	96.5	37.5	28.0	40.0	43.5
27 Mill rooms	2.3	91.5	....	....	7.5	89.0	10.0	123.0
28 Forge or blacksmithing shops	9.1	52.5	....	....	20.0	56.5	6.7	156.5
29 Foundry or molding shops	2.3	91.5	....	....	20.0	56.5	10.0	123.0
30 Forge and foundry shops	2.3	91.5	....	....	17.5	63.5	3.3	176.0
31 Sheet metal shops .....	....	....	....	....	5.0	96.0	20.0	80.5
32 Art metal rooms or shops	4.5	75.0	....	....	5.0	96.0	....	....
33 Plumbing rooms or shops	4.5	75.0	....	....	2.5	102.5	6.7	156.5
34 Stock or lumber rooms	31.8	23.0	25.0	42.0	35.0	31.0	40.0	43.5
35 Finishing rooms	11.4	46.5	32.1	32.5	17.5	63.5	26.7	65.5
36 Assembling and finishing rooms	2.3	91.5	....	....	12.5	77.5	6.7	156.5
37 Stock and finishing rooms	4.5	75.0	....	....	2.5	102.5	10.0	123.0
38 Tool Rooms	4.5	75.0	3.6	96.5	12.5	77.5	36.7	52.0
39 Mechanical drawing rooms	20.6	36.5	25.0	42.0	52.5	17.5	43.3	37.0
40 Printing rooms or shops	4.5	75.0	3.6	96.5	7.5	89.0	43.3	37.0
41 Domestic science rooms or labs.	45.5	15.0	60.7	19.5	22.5	49.5	43.3	37.0
42 Sewing rooms or labs.	25.0	29.5	71.4	10.5	67.5	8.0	73.3	12.0
43 Dressmaking rooms or labs.	2.3	91.5	....	....	....	....	10.0	123.0
44 Fitting rooms	9.1	52.5	25.0	42.0	30.0	37.0	46.7	33.5
45 Design rooms or labs.	2.3	91.5	17.9	56.5	5.0	96.0	16.7	91.5
46 Millinery rooms or labs.	2.3	91.5	....	....	15.0	70.0	3.3	176.0
47 Sewing and millinery rooms	6.8	61.5	....	....	5.0	96.0	....	....
48 Cooking rooms or labs.	34.1	70.5	14.4	63.0	77.5	6.0	16.7	91.5
49 Domestic or food chemistry labs.	2.3	91.5	....	....	5.0	96.0	13.3	102.0
50 Living or reception rooms	6.8	61.5	10.7	72.5	22.5	49.5	30.0	60.0
51 Dining rooms	25.0	29.5	46.4	23.5	55.0	16.0	60.0	23.0
52 Pantry	6.8	61.5	10.7	72.5	47.5	22.0	26.7	65.0
53 Bedrooms	6.8	61.5	10.7	72.5	27.5	41.5	36.7	52.0
54 Laundry	6.8	61.5	7.2	84.5	35.0	31.0	20.0	80.5
55 Bath	4.5	75.0	....	....	15.0	70.0	13.3	102.0

*Appeared during 1908-13 but not since then. †Italics indicate an increase of 20 per cent or more since 1913-17.

school communities were arranged in two classes—communities with a population of 10,000 or less and communities or cities of more than 10,000.

For purposes of comparison, Table I includes the 109 space provisions in floor plans reported in the Koos study. The percentages in the first and fifth columns of figures are taken directly from the Koos report, and I have arranged the rankings in the second and sixth columns. Columns 1 to 4 inclusive deal with communities of less than 10,000 and Columns 5 to 8 include only communities of 10,000 population or more. The relative importance of each space pro-

vision in the two periods of time covered is shown by the ranking according to frequency of appearance, while perhaps a more direct and simple measure of the variation in the importance of the space provisions is shown by the percentages. This arrangement will enable the reader to check quickly any certain item and to note the increase or decrease in the percentage of floor plans containing this item.

One striking feature of these data is the large number of space provisions that now appear in floor plans. Table I contains 109 space provisions. Table II includes eighty space provisions that ap-

SPACE PROVISIONS APPEAR AND RANK OF SPACE PROVISIONS ACCORDING TO FREQUENCY OF APPEARANCE

Space Provisions for:	Communities of Less than 10,000 1913-17		Communities of 10,000 and More 1926-28		Communities of 10,000 and More 1913-17		Communities of 10,000 and More 1926-28	
	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank	Per Cent	Rank
56 Domestic science supply room	18.2	38.5	25.0	42.0	27.5	41.5	63.3	19.5
57 Commercial rooms	22.7	33.5	21.4	50.0	22.5	49.5	16.7	91.5
58 Typewriting rooms	34.1	20.5	78.6	6.5	37.5	28.0	56.7	26.5
59 Stenographic or dictation	9.1	52.5	28.8	37.0	25.0	45.5	40.0	43.5
60 Stenography and typing rooms	4.5	75.0	3.6	96.5	....	....	3.3	176.0
61 Bookkeeping rooms	22.7	33.5	60.7	19.5	27.5	41.5	60.0	23.0
62 Banking rooms	15.0	41.0	....	....	10.0	83.5	13.3	102.0
63 Geography rooms	2.3	91.5	3.6	96.5	2.5	102.5	3.3	176.0
64 Art rooms	4.5	75.0	3.6	96.5	17.5	63.5	40.0	43.5
65 Freehand drawing rooms	11.4	46.5	3.6	96.5	32.5	34.0	33.3	57.0
66 Modeling rooms	2.3	91.5	....	....	7.5	89.0	....	....
67 Exhibit hall for art	4.5	75.0	....	....	10.0	83.5	6.7	156.5
68 Music rooms	15.9	41.0	17.9	56.5	30.0	37.0	53.3	28.0
69 Library rooms	54.6	9.0	64.2	15.0	65.0	10.0	86.7	6.5
70 Library stack rooms	2.3	91.5	....	....	15.0	70.0	23.3	72.0
71 Club, society, recreation rooms	6.8	61.5	10.7	72.5	20.0	56.5	13.3	102.0
72 Gymnasium	59.1	8.0	46.4	23.5	50.0	20.0	50.0	30.5
73 Boys' gymnasium	6.8	61.5	10.7	72.5	15.0	70.0	30.0	60.0
74 Girls' gymnasium	4.5	75.0	10.7	72.5	15.0	70.0	30.0	60.0
75 Running track	2.3	91.5	....	....	20.0	56.5	....	....
76 Swimming pool	2.3	91.5	3.6	96.5	17.5	63.5	20.0	80.5
77 Lavatory or shower rooms	27.3	26.0	7.2	84.5	40.0	26.0	13.3	102.0
78 Dressing rooms	13.6	43.5	10.7	72.5	10.0	83.5	10.0	123.0
79 Physical director's office	4.5	75.0	32.1	32.5	27.5	41.5	66.7	16.0
80 Woman physical director's office .....	....	....	10.7	72.5	12.5	77.5	23.3	72.0
81 Locker rooms	6.8	61.5	....	....	22.5	49.5	6.7	156.5
82 Boys' locker rooms	43.2	16.5	78.6	6.5	60.0	12.5	83.3	9.0
83 Girls' locker rooms	43.2	16.5	75.0	8.0	57.5	14.5	83.3	9.0
84 Wardrobes or cloakrooms	47.7	13.5	17.9	56.5	25.0	45.5	26.7	65.5
85 Assembly or auditorium	77.3	5.0	64.2	15.0	82.5	5.0	86.7	6.5
86 Stage in assembly or auditorium	68.2	6.0	89.3	4.0	70.4	7.0	96.7	4.5
87 Dressing room for stage	27.3	26.0	35.8	28.0	50.0	20.0	63.3	19.5
88 Study room or halls	36.4	18.0	75.0	8.0	52.5	17.5	83.3	9.0
89 Session rooms* .....	....	....	....	....	....	....	....	....
90 Lunch rooms	22.7	33.5	32.1	32.5	32.5	34.0	36.7	52.0
91 Boys' lunch rooms	6.8	61.5	3.6	96.5	20.0	56.5	....	....
92 Girls' lunch rooms	9.1	52.5	3.6	96.5	20.0	56.5	....	....
93 Kitchens for lunch rooms	4.5	75.0	53.7	21.0	27.5	41.5	66.7	16.0
94 Principal's office	81.8	4.0	71.4	10.5	90.0	2.5	96.7	4.5
95 Reception or waiting rooms	34.1	20.5	21.4	50.0	50.0	20.0	50.0	30.5
96 Vaults	11.4	46.5	25.0	42.0	12.5	77.5	40.0	43.5
97 Assistant or vice-principal's office	9.1	52.5	....	....	12.5	77.5	20.0	80.5
98 Teachers' offices	25.0	29.5	7.2	84.5	22.5	49.5	20.0	80.5
99 Men teachers' rooms	13.6	43.5	64.2	15.0	17.5	63.5	56.7	26.5
100 Women teachers' rest rooms	18.2	38.5	32.1	32.5	45.0	23.5	60.0	23.0
101 Teachers' rest rooms	34.1	20.5	42.9	26.0	37.5	28.0	36.7	52.0
102 Emergency or rest rooms	20.5	36.5	....	....	30.0	37.0	10.0	123.0
103 Girls' rest rooms	15.0	41.0	21.4	50.0	2.5	102.5	46.7	33.5
104 Textbook rooms (supply)	2.3	91.5	25.0	42.0	5.0	96.0	36.7	52.0
105 Storage rooms	50.0	11.0	46.4	23.5	65.0	10.0	66.7	16.0
106 Janitors' rooms	29.5	24.0	25.0	42.0	35.0	31.0	50.0	30.5
107 Boys' toilets	88.6	2.5	100.0	2.0	90.0	2.5	100.0	2.0
108 Girls' toilets	88.6	2.5	100.0	2.0	87.5	4.0	100.0	2.0
109 Bicycle rooms	9.1	52.5	7.2	84.5	7.5	89.0	10.0	123.0
Number of floor plans in group	44		28		40		30	

TABLE III—SPACE PROVISIONS FOUND IN TABLES I AND II THAT SHOW AN INCREASE OF 20 PER CENT OR MORE DURING 1926-28 OVER 1913-17

<i>a. Administration</i>		<i>c. Health and Physical Needs</i>	
96	Vaults	79	Physical director's office
104	Textbook supply rooms	82	Boys' lockers
167	Superintendent's office	83	Girls' lockers
168	Principal's private office	93	Kitchens for lunch rooms
169	Administration office	99	Men teachers' rooms
170	Secretary's room	103	Girls' rest rooms
171	General office	114	Boys' shower rooms
172	Teachers' conference rooms	115	Girls' shower rooms
185	Receiving room	116	Gymnasium supply room
<i>b. Commercial Work, Industrial and Domestic Arts</i>		122	Medical examination room
13	Electrical laboratories	123	Nurses' room
38	Tool rooms	124	Clinic
40	Printing rooms or shops	157	Cafeteria
41	Domestic science rooms	173	Women teachers' toilet
56	Domestic science supply rooms	174	Men teachers' toilet
58	Typewriting rooms	<i>d. Miscellaneous</i>	
61	Bookkeeping rooms	64	Art rooms
160	Auto shops	68	Music rooms
161	Drafting rooms	69	Library rooms
		86	Stage in assembly or auditorium
		88	Study rooms or halls
		150	Library study rooms
		154	Picture room
		184	Motion picture room

peared in two or more floor plans from 1926-28 and did not appear during 1913-17. In addition to this sixty-three space provisions appeared but once and therefore were not included in Table II. These three numbers give a total of 252 space provisions.

The eighty new space provisions in Table II show an increase of 73.4 per cent over the number appearing in Table I. This increase in the number of space provisions indicates that in planning school buildings more attention is being given to the type of program to be carried out and that the curriculum is being extended by the addition of many new subjects. It is evident that the person responsible for planning a high-school building must be an educator as well as an architect.

Perhaps the most significant feature of this study is the light it throws on the changes in the high-school curriculum. In Table I, for comparative purposes, the schools are arranged in two classes. However, the floor plans for high-school buildings in communities of 10,000 or more offer the most valuable data. Columns 5 and 7 in Table I show that thirty-two, or 30 per cent, of the 109 space provisions appearing during 1913-17 show a decrease in percentage of appearance during 1926-28. Of this number, seventeen show a decrease of 10 per cent or more. Some are being absorbed in other space provisions. This is evidently true of Nos. 28, 29, 30, 48, 52, 77, 78, 91, 92 and 102. On the other hand, numbers 9, 10, 18, 24, 46, 54 and 75 are receiving less emphasis. The most important of the regular curriculum subjects showing a decrease are physiology, physiog-

raphy, manual training as well as woodworking.

The space provisions that are italicized in Tables I and II show an increase of 20 per cent or more in frequency of appearance during 1926-28 over 1913-17. Of these, twenty are found in Table I and twenty-one in Table II. These forty-one space provisions are rearranged in Table III.

The arrangement of the data in Table III shows that the forty-one space provisions having an increase of at least 20 per cent in frequency of appearance, fall in rather definite fields. Nine items pertain to the problems of school administration. More attention is being given to administration than is indicated by these data, since two floor plans were devoted entirely to administration and therefore were not included in this tabulation. Nine space provisions deal with commercial work, industrial and domestic arts. The increase in these subjects indicates that more attention is being given to vocational training for both boys and girls. Fifteen space provisions provide for various phases of physical needs, including school lunch, health and physical education. Increasing emphasis is being placed on medical attention and corrective education as well as on a complete physical education program. In the eight miscellaneous items, we find provisions for art, music, the library and the more highly socialized activities of school life.

In the light of the above analysis of the space provisions in modern high-school buildings, it is safe to assume that the phases of the curriculum receiving increasing attention are those that offer training in the vocations, health and social development.

That One Talent*

If education is to accomplish the most for each individual, some method must be found for enabling the gifted to work forward at their own rate of progress

BY

H. T. MANUEL, PROFESSOR OF EDUCATIONAL PSYCHOLOGY,

UNIVERSITY OF TEXAS,

AND

ALINE RATHER, DIRECTOR OF ART EDUCATION,

OF THE

SAN ANTONIO PUBLIC SCHOOLS

DIAGNOSIS of ability is a first step in teaching, nothing more. The real work of education consists of the situations that are arranged to stimulate and direct the learning process.

One difficulty of the test movement is that frequently testing becomes almost an end in itself. The tester discovers conditions, makes graphs, enjoys the information they reveal—and then files the results away. It is interesting to observe that children differ widely in their artistic talent and to discover those who apparently have outstanding gifts, but this simply introduces the major problem, namely, the educational adjustment to these differences. What shall we do with the gifted child?

We Must Know Our Pupil's Ability

One of the fundamental principles of learning is that a child learns through his own activity—mental and physical. It should be added for emphasis that he learns in no other way. What a person thinks, feels and does, teaches him. It is a short step, then, from this statement to a realization that in response to a given teaching situation, one will think, feel or act according to one's ability. There simply cannot be an intelligent use of teaching stimuli without some knowledge of the learner's ability to respond to them.

In ordinary teaching situations this is often interpreted, and rightly, to mean that the stimuli

*This is the fourth and concluding article of a series dealing with special ability in visual art.



used must not be beyond the pupil's power of response. If words, for example, are used to stimulate certain lines of thinking, they must be within the experience of the pupil. But this is not the whole story. It is the function of education to develop the individual, to raise his mental and physical activity to a higher level.

How to Assure Maximum Development

It is not sufficient, though it is sometimes important, to drill on mental processes and acts of skill in which the child already engages with a considerable degree of proficiency. In dealing with gifted children, we need to emphasize the use of situations that will have the highest possible educative value. If our attention is confined merely to getting stimuli within their ability, we may fall far short of assuring the maximum growth of which they are capable. While in dealing with average or inferior abilities the teacher

needs constantly to be reminded of their limitations, at the other end of the scale he needs to shift the emphasis in the direction of realizing the vast possibilities of the children whose learning opportunities he is shaping. The danger is that the talented pupil will be allowed to waste his time and effort on tasks that have for him little or no educative value.

It is clearly the duty of the art teacher, therefore, to guide his teaching so that those who are most capable will grow as much as possible both in general character and in the specific matter of art. The advantages that children who progress slowly frequently have in the discipline of hard and prolonged effort must not be denied those who are able to do more difficult tasks.

Activity Should Be Educative

The use of gifted pupils on various "practical" projects deserves consideration in this connection. If there is lettering to do or if there are programs to decorate, why not let the child of special talent do the work? Well, why not? We can be sure that the work will be done in a better way than if each child did an equal share. If our goal were simply production, certainly this would be the procedure. But we must not lose sight of the fact that our goal as teachers is educational. If the work can be productive at the same time, well and good; but it must be educative, or it will have no more justification than other schoolroom chores.

When the art teacher is asked to produce a given serviceable product, his first question should be directed toward a determination of its educative value. As the work ceases to be educative, it should be discontinued, unless it is done incidentally for some other worth while end, in which case it should not rob the child of time for really educative opportunity. If for the sake of doing some school task we take the time that should be devoted to productive instruction in visual art, we may be doing more damage to a given child than if we had taken the time from his algebra. The implication that any kind of exercise in art will serve for a given period is as fallacious as to say that a class in arithmetic may as well work on one topic as on any other.

Art Appreciation and the Gifted

Adaptation to individual differences in the ability to appreciate and enjoy the beautiful requires that the material and methods of instruction be varied. Even without extra time, the pupil of exceptional talent will be able to go far beyond those who are less gifted. If education is to accomplish the most for each individual, some

method must be found for enabling the talented to work ahead. It is a mistake to set up a class or age average as an upper limit of development if giving a reasonable time to the subject, without taking time that should go to other subjects, can take a pupil beyond this limit. Art appreciation is not a simple skill, like handwriting, in which one may question the value of cultivating more than a given average proficiency. Assuming a proper balance of interest and achievement, we may say that in the public school the cultivation of appreciation for visual art by the talented pupil cannot go so far that added effort will cease to pay corresponding dividends. Even though he may never become a producer of art products, a high development of art appreciation will serve to open worthy avenues of enjoyment for his leisure hours and might induce him to follow art as an avocation.

Training for Production

On the side of production, if one is to go beyond mere copying, the development of appreciation is of course fundamental. Unless the producer of art products knows and enjoys the beautiful, we may not expect him to achieve much in creating it. Training in art appreciation, then, has a direct vocational value for those who expect to engage in productive art work.

If our analysis of the place that visual art serves in every-day life is correct, every individual is not only a consumer but also a producer of art products, and hence needs training for production. This is perfectly clear when we reflect that everyone arranges visual situations of one sort or another for someone else. It may be no more than adjusting his clothing, placing furniture in a room, writing a letter, placing flowers in a vase or planting the shrubbery in his back yard. He is a producer none the less, and he follows or violates the principles of art, as the case may be.

Training for Art Appreciation

Education for these general projects of art production in which all engage regardless of vocation is in large measure simply that of training for art appreciation. The mechanics of activities, such as dressing oneself, placing furniture, writing letters, and the like need not be the subject of instruction in special art courses. The same thing is true to a less degree in certain manufacturing processes. The training of a mechanic, for example, in the mastery of his tools is not ordinarily a task of the art teacher. The contribution of art as a special subject lies rather in giving the pupil the standards of art that apply to the me-

dium in which he is working and to the articles that he is producing.

There are phases of production, however, in which, according to the present organization of the curriculum, techniques are developed by the teacher of the fine arts. Painting and sculpture are clear examples. To become a painter or a sculptor of standing one must laboriously acquire skill in manipulating the tools and materials of one's art, and instruction in this technique is regarded as the work of the art teacher. To the public-school teacher of art there is often given the additional task of developing technique in certain crafts that border upon the industrial arts. Among these are block printing, etching, batik, leather tooling and lettering.

Drawing Has Unique Position in Art

Drawing occupies a unique position in art education. As simple representation or diagramming, it is not necessarily classified among the fine arts at all, any more than handwriting, printing, photography or any other activity to which the principles of esthetics may or may not be applied. In this sense, drawing is a language to be taught for the same reason that we teach penmanship. The object or figure that is drawn is designed to be a visual stimulus to mental activity, just as a word is such a stimulus. It is a supplementary consideration that places drawing among the fine arts—the fact that drawings are, or may be made, objects of beauty or steps in the creation of objects of beauty. Indeed in pure design the meaning element has so far been overshadowed by the esthetic value as almost to have disappeared.

The clear differentiation of the functions of drawing—the production of language stimuli, on the one hand, and its employment in the construction of certain beautiful objects, on the other—will do much to improve teaching. Both objective and method will vary when the purposes the teaching is to serve are thoroughly understood. To the pupil who is gifted in art, the development of skill in drawing becomes a matter of somewhat different concern from that of the pupil who wishes merely an effective way of presenting ideas.

Three Major Values of Art Education

Instruction in the various techniques involved in the production of art products—drawing, painting, chiseling, modeling and the like—has three major values. In the first place, as we have already seen, opportunity to produce affords a favorable setting for the development of latent abilities and interests and for the discovery of talent. In the second place, when used properly

and in moderation, it contributes to an understanding and appreciation of the products of others. It enlarges one's experience and brings attention to certain factors that might be overlooked except for such experience. In the third place, such instruction leads to actual usable techniques, of value to those who are to practice



them in vocation or avocation. It is this third value that needs to be emphasized in the education of the gifted. For these persons, skill in manipulating brush, pencil or chisel has a potential economic value and certainly a value as a means for enlarging the field of enjoyment through creative work.

Vocation and Avocation

Not every young person who is gifted in art need choose his vocation in this field. The wise choice of a vocation requires much more than the measurement of aptitude and opportunity in a single field. Human nature and human society are exceedingly complex, and the possession of both talent and opportunity in art may be overshadowed by a larger talent and a better opportunity in another direction. We need not feel that the development of a special talent has been wasted if the individual turns aside from it for his main work.

At the same time it must be emphasized that the highest individual and social welfare requires

the conservation of talent and the utilization of special abilities. We owe it to the pupil who shows marked aptitude for some socially useful work to consider the possibilities of turning this to account in making a livelihood and contributing to the world's store of goods. The accomplishment of this end requires a knowledge of human nature and a technique that so far we have developed only imperfectly, but this is no excuse for not working at the job. Without doubt it is the duty of the educator to help the pupil appraise his talents, to give opportunity for their development and to show him how and where they may be wisely applied.

Vocations for Different Talents

In the analysis of artistic talent it was shown that abilities vary widely both in their total effect and in their constituent factors. Over against this fact should be set the consideration that the socially useful activities in which artistic talent is an asset are also widely varied. At one extreme is the copyist, who indeed might conceivably have only a moderate appreciation of the beauty that he is able to express in imitation of the creative effort of another. At the other extreme is the creative artist, a painter it may be, like Sargent. When we compare the work of the two, the contribution of the copyist seems unimportant enough. However, when we compare the work of the copyist in some position in which perhaps he is serving as a skilled decorator, with the work that he might have been doing as an unskilled laborer but for the utilization of this talent or some other, the importance of developing and utilizing his aptitude appears in a different light.

Training in Visual Art Is an Asset

There are many occupations in which special talent and training in visual art are a distinct asset. In many of them the worker's effort is directed toward the production of some object that is useful for other reasons than for its beauty. It might be said that from the standpoint of the fine arts the contribution of these craftsmen is one of decoration, but this seems to imply the adding of something that the object itself does not possess. It is better to say that the workers are so talented and trained that they construct an object not only to serve its primary purpose but to be beautiful as well.

In the manufacture of all objects that are to be part of a visual setting, there is occasion for an application of artistic principles. The application of these principles must be the work of the artistically talented and trained. For educational and vocational guidance it would be useful to

know the opportunities for persons equipped to give expert artistic service in the several industries of a given community.

The following heads under which the "American Art Annual for 1926," published by the American Federation of Arts, lists craftsmen suggest a great variety of occupations in which artistic talent may find expression (pp. 554-567): basketry; batik and dyeing; bookbinding; ceramics (including china, porcelain and glass decoration); decoration (including painted furniture, fans, lamp shades, fabrics, trays, flowers, frescoes, mosaics, gesso, ships, linoleum prints, stenciling, marquetry); design; goldsmithing; graphic arts (including book plates, lithography, printing, type design, lettering, gilding, engraving, die cutting, illuminating); interior decoration; jewelry (including enameling and lapidary); lace; leather work; metal work; modeling; needle work (including embroidery and bead work); occupational therapy; photography; pottery; silversmithing; stagecraft; stained glass; textiles (including rugs, tapestry, weaving, wood block printing); toys; wood carving; woodwork (including cabinet work, furniture making, frame making, pyrography).

Relatively Few Live by Art

This list does not include the painter, the sculptor and others whose work may be said to be in pure art. Nor does the list include the illustrator, the cartoonist, the architect and the landscape gardener; yet in each of these occupations talent and training in art are a decided asset. We may add to these the teaching of art, art criticism and the work of curators and assistants in museums, and still the list of vocations in which artistic talent may find expression is incomplete.

According to census figures relatively few persons are gainfully employed as artists, sculptors and teachers of art. In the federal census of 1920 only about two twenty-fifths of 1 per cent of the total population ten years of age and over who were gainfully employed were listed under this classification. The number so listed was only about 1.6 per cent of those engaged in professional service of various kinds.

Value as a Vocation

It is obvious, then, that if the situation revealed by the last census is even a rough indication of the demand for painters, sculptors, and teachers of art, we should expect to train only a very small proportion of our pupils for such vocations. Of course we may hope to raise the level of culture until a larger and larger proportion of

the population would find this a remunerative field of labor. But we could double the number and still the proportion would be exceedingly small. On this basis if we were to choose the most gifted for training as sculptors and artists, we would choose from persons having abilities at least three sigma¹ above the average of the population.

Success Results From Interest and Industry

It is altogether improbable, of course, that creative workers in pure art in the past came entirely from persons who in infancy had possibilities of developing beyond the point that others would have reached by equal training. Achievement in any complex activity of adult life is largely a result of interest and application in that direction. To be sure, the person with the greatest talent to begin with has theoretically the greatest possibilities of achievement. But so many factors determine the final output that the possibilities of outstanding creative work are doubtless open to individuals who in early life stand much lower in the scale than the figure above would seem to indicate.

Probably no one knows just what degree of talent—on the assumption still unrealized that we were able to measure it exactly—is necessary to open the possibilities of a laudable career in painting or sculpture. In the present stage of our knowledge, certainly it would be dangerous to discourage anyone who shows ability markedly above the average.

Applied Art and the Gifted

The evidence suggests that most of our pupils who long for vocations in the field of art must find them, if at all, in applied art. A few of the gifted whom circumstances favor may be expected to go directly into the field of pure art, but for most of our pupils it must remain a kind of avocation or part-time occupation throughout life or until they have proved their ability in it. It would be desirable, of course, to have the organization and the means to detect creative talent and to give the most promising young people a direct opportunity to create artistic products without having to work at some other job to keep the wolf from the door. It is particularly important that all young people of great talent and interest in visual art be given the proper educative opportunity, even though we are very sure the future of most of them will be in industrial art. We must not lose sight of the immeasurable social value of their possible contribution in this field.

¹ A statistical term used for measuring deviations from the average. Persons having ability higher than plus three sigma are rare, fewer than three in a thousand.

It is interesting, indeed, to observe that the common avenue for entering upon a career as a painter was once the shop of a tradesman, a master painter, whose business, according to Cox,¹ was "to supply anything that was wanted in the way of painting, from the ornamentation of a chest or the painting of a sign to the production of an altarpiece or the frescoing of a palace wall." "To such a master," we are told, "a boy who showed any disposition toward art was bound out, at the age of twelve or thirteen, for a term of years. He was to give his services in any capacity in which they were available and a sum of money was paid the master, who, in return for this premium and service, engaged himself to teach the boy his trade."

Vocational Training Increasingly Popular

Reference to the apprentice system, under which artists were once trained, directs attention to the changed conditions under which children are educated to-day. The period of general education has been substantially lengthened and the schools, now operated largely by the public, have taken over a greater share of the preparation for vocations. This new arrangement has both advantages and disadvantages, as one may readily see. The school offers possibilities of a wider culture, and theoretically at least has a somewhat more expert and unselfish interest in the pupil. At the same time, it is possible that the new arrangement may result in too long a postponement of vocational choice and a neglect of needed early training.

The advantage of early training is recognized in current educational theory. Cox, whom we have already quoted, insists that the education of eye and hand can hardly begin too early, if technical mastery is to be attained. In the conservation of talent, then, this throws the burden upon general education to give opportunity for the development of skills and interests that will later be utilized in vocation. The point at which specific vocational training should be begun varies somewhat with the ability of the individual and his probable school future. In general, most of the occupational training of the elementary school and the high school should be that which is probably best characterized by the designation general and prevocational.

There may well be, of course, specific vocational training for certain pupils who will go directly into business or industry. And there may well be a plan of part-time education in which the school supplements the training which the young worker gets on the job. But much of the actual skill in

¹ Cox, Kenyon. *Painters and Sculptors* (1907), p. 4.

work, in our present organization, may best be developed in a kind of modified apprenticeship or in vocational courses that supplement the work of the ordinary eleven or twelve grades of the public schools. These courses, to be sure, may be organized and directed by the local board of education in connection with the high school, or they may be given in higher institutions of learning. Withal, however, it must not be forgotten that the provision of training for vocations in pure and applied art is distinctly a function of public education.

In art, as in other subjects, specific plans for adjustment to individual differences may take various forms. Even in a class in which there is a wide range of abilities, it is possible to differentiate the assignments and give special assistance to pupils of marked talent. Again, by providing suitable electives the gifted can frequently be separated and given work different both in content and in method from that of the ordinary classes. These electives may be offered during the regular school hours or scheduled for hours during the time when the school is not regularly in session.

Individualized Instruction

On the side of technique it is possible to arrive at an extreme individualization of instruction. The individualization of the widely discussed Dalton and Winnetka plans may, of course, be applied to instruction in art. In such a plan it is necessary to organize the instruction thoroughly and administer the work so that each child can work forward at his own rate of progress. A recent writer in the *School Arts Magazine* de-

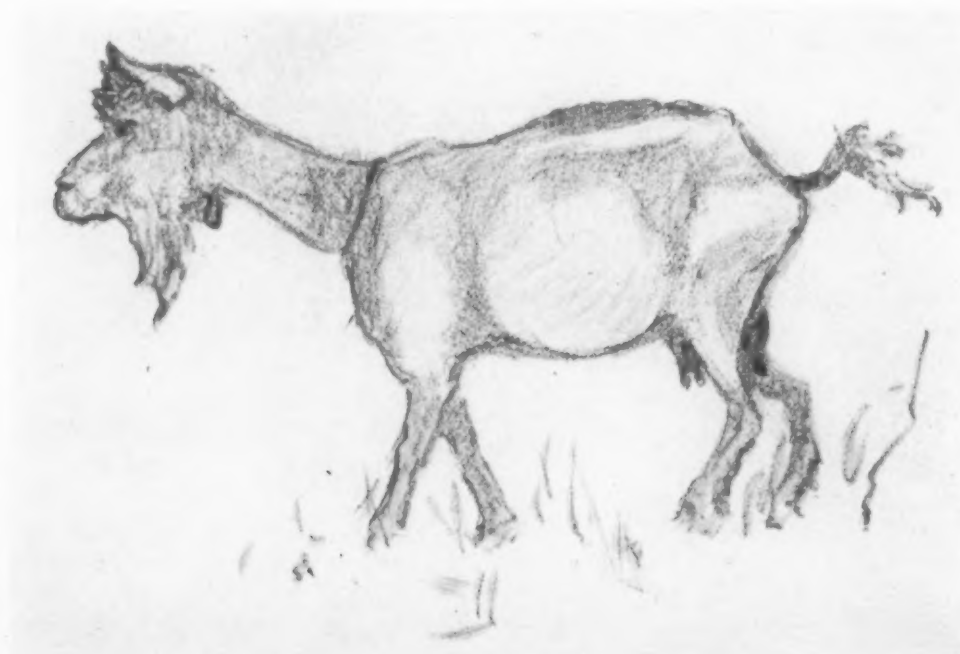
scribes an experiment in the application of the Dalton plan to art education and records that he found the plan successful.¹

Discussions of the conservation of talent are seriously incomplete if they end with mere abilities. We need to inquire not only what the pupil can do but also what he will do. This, it must be admitted, is a neglected as well as a difficult field of education. It is relatively easier to develop abilities than it is to develop dispositions that conform to our ideals.

This means that the talented pupil should be taught self-discipline, which will make him an acceptable and helpful member of society. We have accepted all too readily the popular idea that artists must be temperamental if not even careless or erratic. To be sure, we may tolerate certain unfavorable traits for the sake of outstanding contributions, but we ought to have both the contributions and sensible, unselfish conduct as well. If proper methods of training are used, the necessary restraint will actually lead to greater accomplishment than may be expected from one who devotes himself to selfish indulgence.

The problem of moral education, in the sense not only of self-control but of the direction of conduct toward the highest human welfare, is probably the greatest problem of society to-day. A part of this unsolved problem is the training of the talented to devote their abilities to enterprises and projects that advance the general good. The "art for art's sake" ideal can easily be overdone. In the long run we must have that which best serves the welfare of the whole community.

¹ De Francesco, Italo L. Vol. 27: 235-237, Dec., 1927.



The School Executive Looks at the Teachers' Federation

Superintendents express views on whether or not the American Federation of Teachers should be supported, and the general conclusion of the symposium is that little need exists for such an organization

THAT enough organizations exist now to look after the professional interests of the teacher without any affiliation with the American Federation of Labor through its American Federation of Teachers branch is the opinion of school executives who have contributed, in this discussion, to a symposium on the subject of support for the new federation, based on the article, "Should the American Federation of Teachers Be Supported?" by Florence Curtis Hanson, secretary-treasurer, American Federation of Teachers, which appeared in the December, 1928, issue of *THE NATION'S SCHOOLS*. Neither should public-school teachers be allied with any class, their allegiance being to the public, these executives further agree.

"To attempt to get rid of unsatisfactory conditions at the cost of entangling the teaching profession in an organization clearly tainted with labor union professionalism may be good business for some teachers but it is pretty sure ultimately to be bad business for the cause of public education," is the way Hector L. Belisle, superintendent of schools, Fall River, Mass., expresses his view of the subject.

"Mrs. Hanson's discussion of the excellencies of the American Federation of Labor and her attempt to put the federation of teachers in the same class muddles the matter from one viewpoint and clarifies it from another," Mr. Belisle writes.

How Professional and Economic Groups Differ

"The American Federation of Labor is an organization whose aims are purely economic-social. It was instituted primarily for the personal economic welfare of its own members. It protects and defends wage earners from employers of labor whose sole purpose in business is the making of money. Organized labor is absolutely necessary for offense and defense against such employers as seek to impose unfairly upon their employees for their own profit.

"Professional organizations like medical, dental and bar associations have professional-social aims. Their purpose is the professional improve-

ment of their members to enable them to render better service to the public.

"It is nationwide knowledge that the essential movements of the various groups in the American Federation of Labor relate to wages and hours and other labor matters that are of real importance only to those directly concerned, employers and employees. The professional associations on the other hand rarely, if ever, discuss either hours of labor or payment for services rendered. Their interest, almost exclusively, lies in the improvement of service.

"Teachers naturally belong with the groups interested in professional-social advancement. No organization of teachers should stand before the American people tainted with the suspicion of economic-social aims. Yet that is exactly where the American Federation of Teachers now stands.

Many Educational Organizations Exist

"When Mrs. Hanson boasts of the 'altruistic' (her own word) program of her organization and then sets forth as its first article, not the creation of a finer professional attitude, not the development of a more sincere spirit of service but the labor union ideal, hardly entitled to the first place among the aims of a group of professional men and women, of securing a \$2,000 minimum salary for teachers, she guilelessly and unconsciously reveals the real purpose for the existence of the federation and for its affiliation with the labor body.

"The cat is out of the bag. Fine phrases cannot conceal the fact that under cover of a professional organization the American Federation of Teachers is intended to operate as a labor union. In Massachusetts this was well understood from the first and that federation counts for nothing there.

"Teachers must organize in order to gain their rights as members of a profession.' Mrs. Hanson seems to assume that the only possible, the only good, the only worth while teachers' organization is the federation. She ignores the existence of the many national, sectional, state, county and local organizations through whose operation

the people are being led to a deeper appreciation of the teaching profession.

"In Massachusetts, where a real federation of local teachers' organizations has existed for years there are elective school committees, tenure of office, retirement with pension, all articles in a state program, besides some of the other articles mentioned by Mrs. Hanson, in operation in various communities. All this without any aid from Mrs. Hanson's organization. A public opinion appreciative of the fine professionalism of its teaching body made this legislation possible.

"The appeal to public opinion is the real remedy for abuses and petty tyrannies. What a few states are doing, all states can be brought to do."

According to Thomas B. Portwood, superintendent, city schools, Atchison, Kan., Mrs. Hanson in her article takes the position that since the American Federation of Labor has in its program certain sound and progressive principles regarding public schools in America, that all teachers should immediately ally themselves with this organization in order that both teachers and pupils may the sooner profit.

Mr. Portwood continues:

"It is not my purpose to dispute here any of the claims of the American Federation of Labor. I will admit now that, so far as I know, this organization has done and is doing much for the American school. However, I am not willing to admit that the American Federation of Labor is the only organization that has a wholesome educational policy or that the mere fact that it has such a policy is any argument at all for the teachers of America to form themselves into a similar and allied body.

The March of Professional Progress

"Most teachers in America are struggling toward the goal of true professionalism. All teachers worthy of the name are deeply concerned in doing everything possible to hasten the day when the business of teaching will have a professional status equal to that of any of the other great professions. Many factors are involved in this march of professional progress. It involves the training and general fitness of the individual, the raising of standards for teacher certification and the improvement of conditions affecting teacher tenure. It also implies a development of professional zeal within the individual that kindles the fire of enthusiasm for the task in hand and brings an abiding faith in teaching as a profession. It also implies an organization of teachers on a professional basis. The National Educational Association is sufficient for this purpose.

"What we surely do not need is the alliance of teachers with an organization that is not primarily an educational body. There should be cooperation and mutual understanding but not positive alliance. This nation is supporting schools as they have never been supported before. This support comes from the people generally. No particular organization has any right to claim credit for its creation. It is rooted in the fundamental American principle of equal opportunity for all. It has been demanded by all classes.

Freedom—the Keynote of the Classroom

"At the beginning of Mrs. Hanson's article are enumerated so called 'Blue Laws for Teachers.' One would gain the impression from this part of the article that teachers are a group of sad, dejected, abused beings living in dire dread of the other human beings whom they serve and in constant fear of the authorities by whom they are employed. It would seem that a few unusual incidents have been collected and from these a sorry picture of the teacher's lot presented. According to the writer, so deplorable has this persecution become that teachers are being driven from the profession and others deterred from entering it.

"This situation seems to be considerably exaggerated. The teachers in this nation of ours are held in higher esteem than ever before in history. Thinking people recognize true worth and reward it. Teachers rank high when service is considered and when was service ever considered so much as now? The keynote in our classrooms is 'freedom of expression for teacher and pupils,' and this freedom extends beyond the classroom. A high standard for teachers—yes—but all the freedom and independence that any teacher is capable of assuming.

"This freedom extends into the very government and administration of educational systems. Teachers have a voice in practically all school systems, large or small. They have this voice not because they have unionized and made demands but rather because those in charge have recognized the worth of teacher participation and have invited it.

"The successful administration of any enterprise depends upon a 'straight line of authority.' This line of authority must reach from the lowest subordinate directly through to the final authority. A school system is no exception to this rule. The straight line so called does not prohibit a free voice by all concerned in the administration of the enterprise.

"A board of education, working under the laws of a state, must have complete control of the

school system that is placed under its charge. Any organization that attempts to nullify or scatter this authority is working toward chaos in American public education.

"Let us have more loyalty to the great teachers' organization we now have—the National Education Association. We do not need or desire affiliation with any other body."

In view of the recent conflict between the board of education of Seattle, Wash., and the Seattle branch of the American Federation of Teachers, the following contribution to the symposium, by Thomas R. Cole, superintendent, Seattle Public Schools, is particularly timely.

"I appreciate the invitation extended to me by the editor of *The NATION'S SCHOOLS* to state my position regarding the American Federation of Teachers," Mr. Cole writes. "I shall not discuss the charges that have been made relative to the Seattle school system by those who claim to speak for the organization in question, as these are of secondary importance to the main issue at hand. The record of the Seattle schools for the last quarter of a century speaks for itself.

"The real question then is this: Is the American Federation of Teachers, as an organization, in harmony with the underlying principles of public education in the United States?

"It has been said that America's greatest contribution to civilization is her public-school system. Let us assume for argument that this be true. The greatness of our public schools springs from the fact of their wide open door of equal opportunity for every child. The continuance of a fair chance for every child depends upon the universal support of the schools by all classes of the American people. This can only be secured in the future, as it has been in the past, through absolute freedom of the schools from interference or control by those who are affiliated with any group promoting special interests.

What About the Superannuated Teacher?

"The American Federation of Teachers, however plausible its claims may be, by reason of its affiliation with a special class group, is not only out of harmony, but stands in direct opposition to the fundamental principles of the American public-school system."

The masterly manner in which Florence Curtis Hanson has presented the American Federation of Teachers' side of a much disputed question is complimented by D. E. Wiedman, superintendent, Bellingham Schools, Bellingham, Wash., who points out that "she has been clear and concise, logical and almost convincing, in her arguments in favor of a federation."

"From an executive's standpoint a federation is not desirable," Mr. Wiedman believes. "Those who have been in executive work for any period of time realize that there are times and conditions that make the transfer of teachers and even the elimination of teachers from the corps almost a necessity. Under a federation this would be impossible. There are times when superannuated teachers, although in their own minds still able to perform their classroom duties, become a drag upon the educational system and should be retired from active service. Under the narrowing restrictions of a federation this also would become impossible without the virtual consent of the teacher involved or of the federation of which she happened to be a member. In other words, a federation of teachers handicaps school administration and curtails executive prerogatives.

Talking Frankly With the Teachers

"I realize that this is one of the strongest arguments being expounded in favor of the federation as against the superintendent who through personal pique, undue social pressure or for various trivial reasons may cause an instructor to be removed. My long term of contact with school executives has convinced me that, as a whole, irrespective of how much they may be accused to the contrary, they are just and charitable even to a fault in the consideration of the retention of teachers in their corps.

"To-day, no teacher need fear loss of tenure if she does her work. It will also be found that every superintendent will concur in the desires of his corps for increased remuneration and better teaching conditions commensurate with the financial ability of his district and comparable to those of other districts of his state. When his knowledge of conditions makes him sure that requests of his corps cannot be met, the superintendent will frankly tell his co-workers and they, having confidence in him as an executive, will continue to work for the best interests of the district in which they are employed.

"If these conditions be true, as I feel they are, the teachers of America have no need for an organization other than their own state association, which works for the betterment of school conditions within its own state, and the National Education Association, which is diligently working for the advancement of education."

That the article by Mrs. Hanson ignores the fundamental principle that public schools exist solely and wholly in the hope that a better citizenship must result from the education of all the children of all the people, is the opinion of L. C. Ward, superintendent, public schools, Fort Wayne, Ind.

Mr. Ward continues: "Public schools are not maintained by the people in order to make jobs for superintendents, principals or teachers, or to protect such persons in their jobs. Public schools, maintained by the people, are and should be controlled by the people through the medium of boards or commissioners. Such officers must be free to act according to their best judgment without undue pressure from an uninformed public on the one hand or from an interested group of professional persons on the other. They welcome advice and constructive criticism from any source but they do and should rightfully resent the machinations of politicians, either of those within or those without the schools.

The Relation of Educators to the Public

"Teachers, principals and superintendents are public servants, paid by the public, answerable to the public. No third party has any right whatsoever to come between the people, as represented by school boards, and the teaching body. It is unthinkable that the principles developed by organized labor in its struggles with organized private capital should have any valid application in the relations of public servants with the whole people. To make any such application is to indict the whole people on the score of injustice, rapacity, selfish greed and carelessness with respect to human rights. No such indictment can be fairly sustained. The people have been more than generous in their treatment of the schools. With hundreds of thousands of teachers employed by thousands of school districts, the cases of injustice and unfair treatment are so few as to be negligible. And, as in all other matters of public import, the people have their own powers of correction and these they are not slow to exercise.

To Whom Are Public Servants Answerable?

"The public school in America has wholly escaped from the tyranny of one-man control, whether he be soldier, king or high priest. Shall a more dreadful tyranny, the tyranny of an interested mob, now dictate the policies and control the actions of the people through dangerous pressure upon their chosen representatives? Can a republic be safe when its public servants are answerable, not to the people, not to the chosen representatives of the people, but to their own court of review?

"Nobody will question the right, nay even the desirability, of teachers' organizing for professional purposes, for social contacts, for the improvement of themselves in service. Everybody, except a small minority of teachers, does question their right as public servants to set themselves up

as judge and jury in a cause of pecuniary interest to themselves. Everybody except this small minority does question, upon grounds of public policy, the right of any group of public servants, whether they be teachers, firemen, policemen or soldiers to owe any obedience to any authority except the authority of the whole people, as expressed in the legal machinery set up to conduct the several departments of government."

A. S. Jessup, superintendent, Cheyenne Public Schools, Cheyenne, Wyo., sets forth his reasons for not desiring a local union of the American Federation of Teachers in his community:

"First. In my opinion the National Education Association, the various state teachers' associations and the local city and county associations which are units of the National Educational Association furnish all the organizations to which our teachers can well belong.

Judging the Programs of All Classes

"Second. There may have been some need for such an organization as the American Federation of Teachers twelve years ago at a time when the National Education Association included only a small membership. That need does not exist at the present time when 20 per cent of the teachers of the nation belong to the National Education Association. If I am informed correctly, this is a larger percentage of the teaching profession than the percentage of labor belonging to the American Federation of Labor.

"Third. Public-school teachers serve all the public and should not be allied with any class. They should be free to judge the program of every class and take the best from each.

"Fourth. Strife and contention seem to follow in the wake of many organizations of the American Federation of Teachers. The cause of education does not prosper in such an atmosphere. I prefer to secure the aims of the educational program more slowly and keep the good will of every portion of the community. In fact, I think the cause we have at heart is best served in the long run this way.

"Fifth. It is not likely that teachers will want to belong to two national organizations. The National Education Association has become so strong and has accomplished such a splendid program for the uplift of the profession and for the progress of education that it should have the support of all forward looking teachers. I make this statement with due consideration for the good work of the American Federation of Teachers in some localities. Teachers should present a unified front and they can best do that in our own organization, which is unallied with any class."

This New Catholic High School Is a Credit to Chicago

Compactness of plan and necessary economy of space serve administrative efficiency and modern teaching methods to an unusual degree without sacrifice of dignity and charm and without jeopardizing discipline

BY HENRY J. SCHLACKS, ARCHITECT, CHICAGO, AND SUSA P. MOORE, CHICAGO

HOLY Family Central High School for Girls, Chicago, dedicated May 1, 1927, and put to full use during the current school year, represents a highly interesting achievement architecturally, because of the unusual problems it offered in planning and design; administratively, because of the extensive preliminary studies it involved of many representative institutions of the kind, and educationally, because the teaching Sisterhood, the Sisters of the Holy Family of Naza-

reth, has achieved modernity of teaching method without in the least jeopardizing the fundamental disciplines.

There is good psychology here. Educational advice is offered so definitely on the basis of intimate knowledge of the student's home and working environment that subsequent vocational and other readjustments are kept close to an irreducible minimum. The educational objective here is that the girl graduate is fitted for life, not life



Holy Family High School for Girls, Chicago.

as a speculative adventure but harmonious life in the niche from which the student was taken and to which she expects to return. Aspiration is fostered, not restless discontent.

A four-year course is given and a high percentage of students sign for the full four years. The liberal arts training includes special facilities for advanced work in music and Latin. French and the Polish language are the modern tongues taught. A course in home economics is a requirement of all students except those in the school of commerce. Science courses in biology, chemistry and physics are offered. All students pay a matriculation fee of three dollars, and a tuition fee of six dollars per month covers general and commercial courses. Fees for voice, piano and painting are scaled according to the work done. Provision is made for a limited number of resident students. The Sisters of the Holy Family of Nazareth have labored in Chicago, chiefly among Polish people, since 1885. To-day the congregation owns and operates twenty-five parochial schools and two hospitals. The high school just completed suitably culminates their educational plans.

Secondary education is no stereotyped affair in this institution and the working relationships of the several departments offered a special problem. Sixty rooms were needed. Parlors, library,

science rooms, music rooms, gymnasium, auditorium and chapel were necessary, as well as the usual sanitary arrangements, lockers, cafeteria and other service rooms. The available building site adjacent to other academy buildings in the crowded downtown district served was only 187 by 125 feet. A four-story building was the solution. Construction is of pressed brick, with cut stone trimmings. The building is spacious and the necessary compactness has involved no sacrifice of dignity and charm. And it is efficient.

The rooms are as follows:

- 13 Classrooms
- 1 Chemical Laboratory
- 1 Apparatus Room
- 1 Dark Room
- 1 Lecture Hall
- 1 Physical Laboratory
- 1 Apparatus Room (Physics)
- 1 Dark Room (Physics)
- 1 Lecture Hall
- 1 Biological Laboratory
- 1 Apparatus Room (Lab.)
- 1 Domestic Science Room
- 1 Practice Dining Room
- 1 Serving Room
- 1 Typewriting Room
- 1 Bookkeeping Room
- 1 Vocal Music Room



Corner of room devoted to domestic science class work.



Typical classroom arrangement showing grouped windows and specially designed cabinet for nature study supplies.

- 4 Music Rooms
- 1 Large Dormitory
- 6 Smaller Dormitories
- 1 Sitting Room
- 1 Infirmary
- 1 Kitchen
- 1 Refrigerating Plant
- Dining Rooms and Serving Rooms
- Storerooms
- Play Hall
- Locker Rooms
- 1 Natatorium
- 1 Chapel
- 3 Offices
- 1 Library
- 1 Library Workroom
- 1 Reading Room
- 1 School Supply Room
- 1 Elevator
- 1 Parlor
- 1 Alumnæ Room
- 1 Chaplain's Three-Room Suite

Special

In each story are a full and complete fire alarm system, an automatic program clock system, a telephone and call bell system, a janitor's closet and dressing rooms.

Theater with balcony, 600 seating capacity, with moving picture room fully equipped.

Natatorium is 20 by 60 feet, with public space, locker and shower rooms, all in impervious tile.

Boiler and Coal Rooms

2 Storerooms

1 Janitor's Apartment

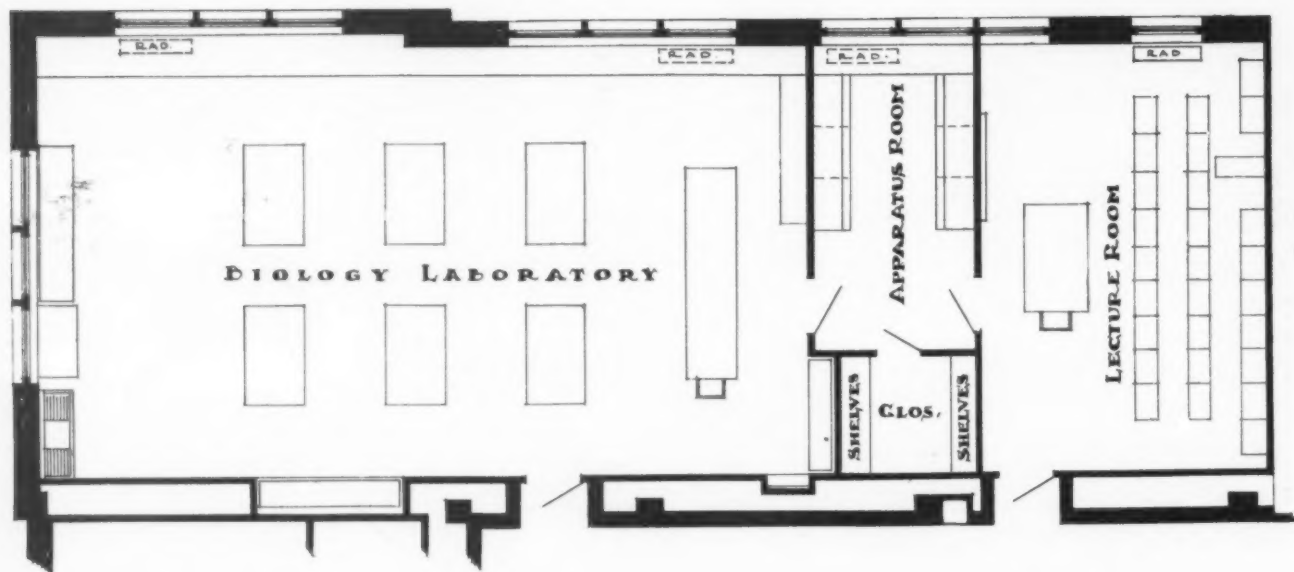
2 Ventilation Fan Rooms

Filter and Sterilizing Room

Capacity: 450 students in classrooms; 250 students in laboratories; 75 students in extension classes: a total of 785 students.

Much ground would need to be covered even to state the extent of this problem. The first consideration was based upon internal working relationships of the various departments, and the allotment of supplementary service space for the sixty rooms. The lot was small and the activities were so definite that not much play of architectural fancy was permissible. The building accordingly had to consist of four stories and basement. The several departments then fell into two categories: (1) the recreation group, which includes the dormitories, auditorium, gymnasium, natatorium and chapel, and (2) the instruction group, which covers the classrooms, the library and all other training and laboratory facilities.

The instruction and recreation groups are handled throughout as separate and independent units. The vertical section of the building mid-



way between the two entrances, shown in the exterior view, reveals two theoretically separate buildings, suitably linked together by means of connecting corridors on each floor. Each section carries its own complete and independent accessories in the way of entrance lobbies, exits, lavatories and ventilation arrangements.

Further administrative advantage is seen in the fact that departments devoted to the more profound studies are relegated to the upper stories. Thus it transpires that all the more intense work in chemical, physical and biological laboratories, and the domestic science departments, along with their associated lecture halls and apparatus rooms, are high up, away from the

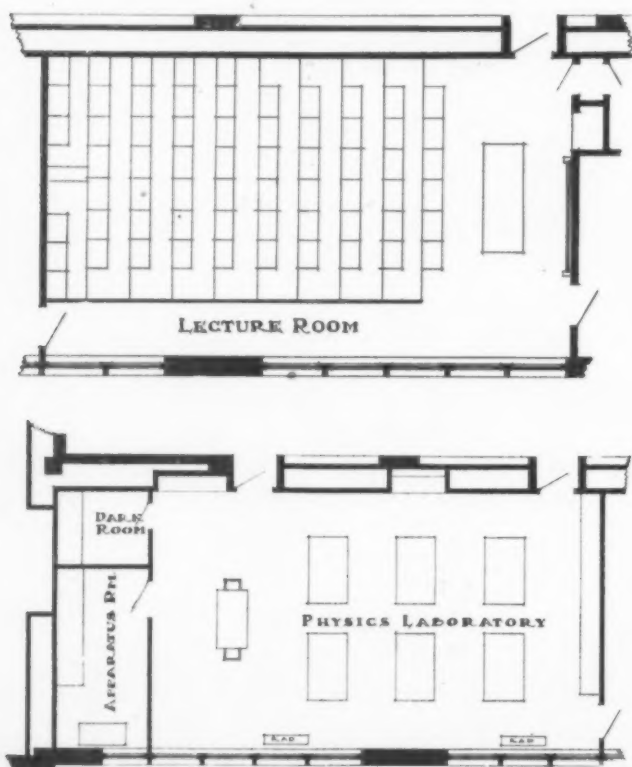
recurrent movements of the lower forms. In the recreation unit, the music rooms, suitably sound-proofed and otherwise isolated, are on the top-most floor.

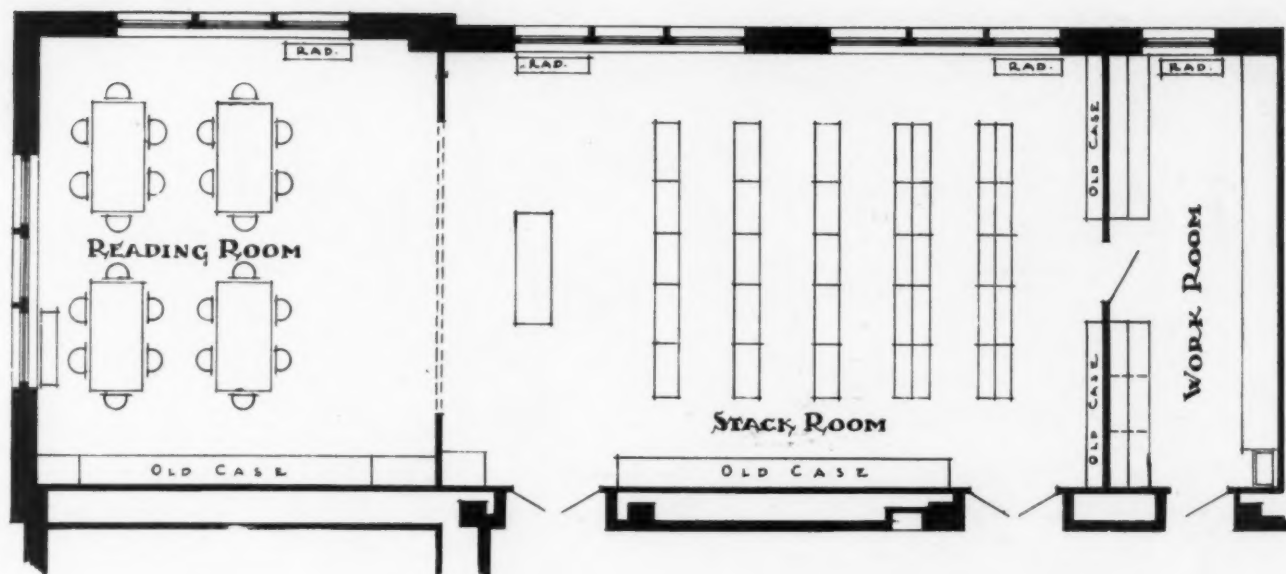
The basement houses the several adjunct services not in use during school hours, which under all circumstances should be detached from any classroom. Here we find the cafeteria, the kitchen, with its accessory services and the storerooms. Playrooms, the laundry, the refrigerating plant and the ventilating apparatus are housed here. It is especially noteworthy that no crowding is evident anywhere and that there is complete absence of dark or unventilated corners even in the basement.

Simplicity Achieved by Vertical Planning

Vertical arrangement is made of all the large single units of the recreation section. Natatorium, auditorium, chapel and dormitories have the structural advantage of being similar in dimensions. Hence supporting columns for one unit do duty for all. The natatorium is in the basement. The auditorium, directly above, occupies the same area. The chapel on the third floor is of the same width and length, and the dormitory on the top floor conforms in the same general manner. In addition to the structural simplicity achieved by this vertical arrangement, economy and space saving are effected in a common use of stairs, both front and back, all capable of independent use. This independent use of the recreation section is seen in the neighborhood use that is made of these rooms without in the least disturbing school routine.

It is a distinctive feature of the Catholic high school that provision is always made for the suitable reception of parents and other visitors close to the main entrance. Here the sunny southern





exposure lends charm to the reception room, and the alumnae room with club comforts is another invitation to make the school a neighborhood center. Comfort and beauty are noticeable in the seating arrangements everywhere.

Other features of lesser importance have been carefully designed. There is an interchange telephone system, efficient but unobtrusive, for all instruments are recessed in suitable niches in rooms and corridors. The automatic clock system advisedly carries few clocks. Each story has its clock in the corridor, and there are clocks in the laboratories and in certain service rooms and offices. The auditorium has a moving picture booth in the gallery, for teaching or recreational purposes. There is a fully equipped stage.

Much study was given to the distribution of instruction group rooms with respect to size. The alumnae room, the library and the biology room occupy equal space and are vertically arranged one above the other. The alumnae room is on the first floor, close to the entrance. The library, above it, is quiet, yet accessible to classrooms on the first and second stories and to the science rooms on the floor above.

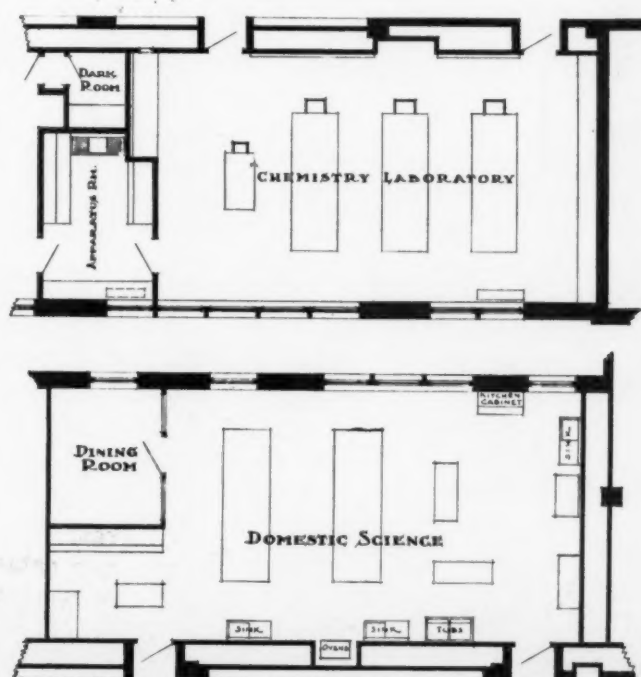
The heating and ventilating systems are combined. The simple method is used of propelling tempered air through a trunk line conduit, which extends the full width of the ceiling of the basement corridor and the full length of the corridor, with vertical conduits to the rooms in the upper stories. This system is supplemented by direct radiation in each room underneath the windows. Five separate fan systems provide suitable unit control of air movement. Schoolrooms and the auditorium have independent systems. Toilet, kitchen, and fume hood exhausts are separate. All are under thermostatic control.

All rooms are lighted from above by windows

brought close to the ceiling. The windows are placed 4 feet 6 inches above the floor, and the space under the windows is available for lockers, 9 inches deep. Two compartments to a locker give ample locker space for all pupils. The lockers have through and through ventilation under a system of control that obviates any possibility of air backing up into the room. The locker plan is a space saving device and also keeps lockers at all times under the eye of teachers and pupils.

A pleasing feature of this building is the extreme width of the corridors. The trunk line corridor is 12 feet wide, the others, 8 feet wide. Mass movement can therefore be carried out in all directions without crowding or confusion.

The corridor walls are faced with pressed brick





Model seating arrangements prevail throughout the building. Here is a typical classroom. The windows are easily cleaned, being equipped with swinging central panels, which swing inside.

wainscoting to the full height of the doors. The thickening of the wall space between corridors and rooms, made necessary to accommodate the risers of the heating and ventilating systems, serves a double purpose in providing recessed vestibules for entrance doors to rooms. All doors swing out but do not project into the corridors. The wall recesses are used to great advantage in cooking and chemistry rooms. All ovens are recessed. Bake ovens, show cabinets, supply chests and individual lockers thus are flush with the walls. They present no surfaces for dust accumulations and no irregular infringement of space to spoil the symmetry of the room. Protecting hoods do not project.

The domestic science room is in use at all times. The chemical laboratory is directly opposite the domestic science department. Chemical problems are set by the day's work. We have here the unusual spectacle in a secondary school of pupils working overtime on original problems they set themselves. Even chemical science is not formidable to secondary pupils if they have enthusiastic leadership. The principal of the school is herself a chemist. "The pupils are initiated by insensible degrees into the more intricate matters," she says. "We set no detached, theoretical problems here. We try to answer by experiment the questions pupils are interested in. We see to their proper technique, and arrange so that they will not overreach themselves. Our chemical laboratory is as popular a place for independent work as is the library or the music room."

Full accessibility of plumbing, pipes and wiring is achieved here by means of plumbing pipe

shafts. All such equipment is concentrated in two stacks. A vertical arrangement of lavatories permits a single vertical shaft to accommodate all pipes, and main feeder wires can readily be located and easily maintained. These shafts can be entered from each floor level by means of conveniently placed doors. Horizontal runs under the basement have received similar treatment.

The boiler room is on a lower level than the basement proper. It is connected to the pipe shaft by means of tunnels beneath the basement floor. Accessibility to the blast heating arrangement and to other facilities of the natatorium is direct and unobstructed. The swimming pool space has been excavated to the side wall lines so that feed and drain pipes are in full view and ample space is provided for pumps, filters and heaters. Chlorin sterilization apparatus provides the essential sanitary safeguard against contamination of swimming pool waters. The central refrigeration plant of two tons' capacity is a carbon dioxide machine with multiple delivery points. Iced drinking water is in circulation.

Housekeeping Made Easy

In describing this educational plant it would be a serious oversight not to mention the perfection of its housekeeping. No dark passages invite neglect. All steps and corridors are of terrazzo. All lockers are inset. All storage shelves and cabinets are dustproof enclosures. All dust is removable and all dust is removed. The building is utilized to the utmost, nevertheless it is in order at all times. When this was remarked upon, the principal said, "Certainly we keep it clean," and made no special merit of the simple fact of

cleanliness. We wonder if any school in a downtown atmosphere of an industrial city shows the cleanliness of this institution. The comparative dust counts so generally relied upon by air hygienists as tests of filter efficiencies serve also for purposes of comparison between the merits of prevailing cleaning methods. The windows in this school are easily cleaned as they are equipped with swinging central panels, which swing inside. They also favor ventilation, for an automatic device permits these central panes to stand in a fixed position at any angle.

There has been no false economy here. Seating arrangements, laboratory fittings, library facilities and workrooms, all are built for permanence and low maintenance. Removable parts everywhere permit perfect cleansing of apparatus. Case bronze sockets are durable and are carefully adjusted. Individual equipment is provided even where certain apparatus for common use might have saved money but not time. Storage space is ample. Storage drawers are extra deep. Thought has been given to minor features everywhere. The teachers of chemistry, domestic science and biology, who are writers and original workers in their special fields, have special laboratories for their independent work. Curric-

ula in scientific subjects and other branches follow the U. S. Bureau of Education outlines.

No school movement in recent years has been more spectacular than the growth of Catholic secondary schools in the archdiocese of Chicago during the past ten years. There were 196,819 students in Catholic schools of that see in 1926. Of these, 13,114 were in high schools and colleges for boys and 36,931 in institutions for girls. Fifteen high schools for boys and twenty-one for girls are maintained within the city limits of Chicago.

The Holy Family High School for Girls in its million dollar plant is only one of many such recent projects of these well designed, permanently built plants, that help to make Chicago prominent on account of improved secondary schools. Chicago leads in its number of Catholic schools, with 428 buildings. These schools are fully accredited institutions. Work and play are suitably balanced, and ethics is made as definitely an educational objective as are credits in mathematics. It is a serious business, this task of securing moral, mental and physical balance in the field of education. That the full seriousness of the undertaking is appreciated in Holy Family High School one can well believe from the type of school environment that is being standardized there.



This picture shows the ease with which open window ventilation can be secured by means of the adjustable center panes.

Why the City Should Aid the Country School

"Schools, hospitals and roads are the three great needs of the rural community, and the greatest of these is schools," writes Prof. T. N. Carver, Harvard University, in the *World's Work*. "The greatest single thing that could be done toward making country life as attractive as city life would be to place within reach of every country child as good a school as is provided for the city child."

Professor Carver continues: "If the rural schools are not improved the cities will suffer quite as much as the country. The communities that are to receive the benefit of the training should pay for it. Therefore, all cities should be called upon to pay a part of the cost of all country schools. This could easily be achieved by liberal federal support. A comprehensive and nationwide program of school building and support, standardized, administered and partially supported from Washington, would not only be the greatest thing that could be done for the farmers; it would also be the greatest single thing that could be done for the benefit of the nation as a whole."

What Is the Potential Value of the Teaching Film?*

The experiment shows that better work was accomplished by pupils taught by films than by those in the control class where no motion pictures were used

BY PROFESSOR BEN D. WOOD, TEACHERS COLLEGE, COLUMBIA UNIVERSITY

THE recent extensive experimentation with teaching films, involving nearly 11,000 children and nearly 200 teachers was carried forward under the joint direction of Prof. Frank N. Freeman, University of Chicago, and myself, with the generous cooperation of a large number of school men and women all over the country. The experiment was financed by George Eastman.

The purpose of this educational adventure was to learn what contributions twenty teaching films, used as a regular and integral part of classroom work, might make to the ordinary objectives of good classroom teaching. The possibility of unique contributions was recognized at the outset, but the main object was to determine the nature and extent of the influence of the films on the attainment of the usually accepted goals of classroom practice and to detect and measure any losses that might occur as a result of giving classroom time to the viewing of films.

Improving the Quality of Learning

It has long been recognized that motion pictures make definite and unique contributions to education, such as, for example, presenting precise ideas of dynamic relations, motion studies and, in general, a sense of the concrete existence of places and objects that otherwise remain for most children largely verbalisms or flat and lifeless still pictures. No one has seriously questioned the value of such contributions but thus far no convincing evidence has been produced to show that significant losses do not occur or that such additions to the pupils' school experience are worth the cost in time and money, considering the present state of the schools and their relations, or possible relations, to extramural motion picture exhibitions and other competing pedagogical devices.

It seems reasonable to surmise that in addition to the contributions mentioned above, classroom

films may also increase the rate and improve the quality of learning; arouse stronger and more fertile interests; stimulate more extensive, more appropriate and more satisfying use of books and libraries; increase the quantity, quality and meaningfulness of projects undertaken on the pupil's own initiative; improve the English composition of children, and in general improve their thinking habits. The films may be supposed to accomplish these results by giving children wider opportunities to start their thinking, with a greater wealth of concrete experience than can be gained by any other means now available to the schools.

Maintaining an Open Mind

But scientists and responsible school administrators alike are skeptical of even the most plausible surmises and are rightly maintaining an open mind on the value of motion pictures and on the expediency of adapting and using them in the classroom in a comprehensive way. Their attitude seems to be that, granting both the value and the certainty of some unique contributions, the general adoption of classroom films cannot be recommended to school boards until it has been shown that their use entails no loss in reaching the ordinary goals of education but rather promotes their attainment to a significant degree, and that films can be made an integral and administratively feasible part of the regular school program, enhancing the effectiveness of the customary pedagogical devices and procedures.

We have viewed the films not as a substitute for present instrumentalities of the schools nor as a means to revolutionize the aims of education, but as an addition to the present pedagogical devices of the schools. It is for this reason that in this investigation we have been primarily concerned with the results of tests such as were ordinarily used in the classroom; with observations on the interest and self-activity of pupils in the classroom; with the number and character of the projects undertaken and completed by the pupils;

*Read before Section Q of the American Association for the Advancement of Science.

with the amount of reading done by the pupils as manifested by their recitations in the classroom, their written projects and their use of the school library, and with the observations and reports of the teachers and school officers who were in daily and immediate contact with the classes that participated in the experiment.

In studying the merits of a new pedagogical device it is essential to compare the progress of many classes that have had its benefit in a fairly large but well defined area of instruction for a considerable period of time, with the progress of similar classes that have devoted the same amount of time, under the same conditions, to the same area of instruction, without the aid of the device in question. The validity of such a comparison depends, among other things, upon the extent to which equality and normality of teaching and learning ability and conditions in the two groups of classes compared have been achieved; upon the extent to which differences can be measured and fair allowance made for them; upon the reliability and validity of the measurements and observations used, and upon the extent to which chance factors have been eliminated or accounted for.

11,000 Children in Experiment

Nearly 11,000 children, in more than 300 geography and general science classes, taught by nearly 200 teachers, in grades four to nine inclusive, distributed in twelve cities, participated in this experiment. Of the 11,000 children there were approximately 7,500 in the geography classes and 3,500 in general science classes. The geography and general science pupils were about equally divided between the experimental and control groups. The experimental classes are those that had the benefit of the films and the control classes are those that did not use the films. Throughout the remainder of this report the experimental classes are referred to as X groups and the control classes as C groups. With three or four exceptions, the X and C classes were in different school buildings in each city, and there was practically no contact between X and C pupils or teachers during the experiment.

The experiment began about the first week in February, 1928, and continued until about the middle of May, 1928. The twelve cities cooperating in this enterprise were distributed widely over the United States: Newton, Mass., Rochester, N. Y., New York City, Winston Salem, N. C., and Atlanta, Ga., in the East; Detroit, Chicago, Lincoln, Neb., and Kansas City, Mo., in the central states; Denver, Colo., in the mountain states and Oakland, Calif., and San Diego, Calif., on the Pacific Coast.

The areas of instruction included ten topics in general science and ten topics in geography. They were selected as being among the most commonly accepted topics in general science and geography. A list of the topics in each field in the order in which they were presented is given below:

Geography

1. New England Fisheries—Cod
2. Wisconsin Dairies
3. Wheat
4. Wheat to Bread
5. Cattle
6. Corn
7. Cotton
8. Irrigation
9. Bituminous Coal
10. Iron Ore to Pig Iron

General Science

1. Hot Air Heating
2. Atmospheric Pressure
3. Compressed Air
4. Water Cycle
5. Water Supply
6. Purifying Water
7. Limestone and Marble
8. Sand and Clay
9. Reforestation
10. Planting and Care of Trees

As indicated above, the validity of comparisons of the X and C classes depends upon the extent to which the courses of study involved are adequately defined and delimited, and upon the extent to which pupils and teachers in the X and C groups stay within the areas of instruction agreed upon. Obviously it would not have done simply to list the ten general topics in general science and in geography. Two twelve-week courses might easily be organized around these topics without having any great community of details or of treatment. In order, therefore, to delimit areas of instruction concretely enough to form the basis of valid tests, and to ensure that all pupils in both groups would spend the twelve weeks allotted to the experiment on the same specific body of study materials, detailed study guides were prepared on each of the topics in general science and in geography. A copy of these study guides was given to each child in the X and C groups. The study guides were all uniform in plan of organization and included from four to six subheads with second order and third order items under each subhead, together with notes giving in highly compact form interesting and arresting information about various phases of the general topic. The study guides averaged about five to seven pages on each topic, so that in gen-

eral science the pupils had as a syllabus for this course a booklet of sixty pages, while the geography pupils had a syllabus of sixty-nine pages.

Just before the experiment began, each of the twelve cities, excepting the two farthest west, were visited by one or the other of the directors, and conferences were held with the X teachers and with the C teachers, in separate groups, or with the supervisors and officers in charge of the experiment. The general plan of the experiment was explained in detail and particular stress was laid upon the necessity for both X and C teachers staying within the limits described by the study guides. They were also urged to keep to the time schedule with meticulous care. The C teachers were not only allowed but were urged to use all pedagogical devices that they desired to use, save only motion pictures. As we shall see later, the C teachers availed themselves extensively of this provision by using all manner of maps, charts, pictures, diagrams and lantern slides.

Classroom Exercises Carried On Normally

The teachers in both groups were urged to carry on the classroom exercises in a normal and natural way and insofar as possible to allow the children to maintain a normal attitude toward this part of their school experience. It seemed particularly desirable to avoid any sense of excessive rivalry between the X and C groups, and it was with this object in view that the teachers were asked to maintain a normal attitude in the classroom, treating the course of study prescribed for this experiment just as though it were prescribed by local school authorities. This injunction largely failed of its purpose in several of the cities because a feeling of intense rivalry developed almost immediately among the C teachers and constituted a real handicap to the X groups.

As an aid to the X teachers in adjusting classroom procedure to the exigencies of an unfamiliar classroom instrument, teachers' guides were constructed for the exclusive use of the X teachers. These guides included only the major subheads and notes on arresting bits of information from the study guides. In addition they included brief directions to the X teachers as to how and when to use the films.

In addition to the teachers' guides a brief memorandum, entitled "General Guide for Experimental Teachers," was sent to each X teacher, explaining the purpose of the experiment in general terms and giving more or less explicit directions as to the use of the teachers' guides and the films. These directions relative to the use of the films were the only aids given that were not also given to the C teachers.

It cannot be too strongly emphasized that this experiment was not concerned with educational films in general, but with a particular set of ten films in general science and a particular set of ten films in geography. The indications and conclusions of this experiment can be carried over to the general run of educational films only insofar as such films and their use are similar to those used in this investigation.

The films were built to conform to scenarios that had been written with definite pedagogical goals in view. No material was included in these films merely because it happened to be available from the commercial or other sources of film material. The films were designed to provoke questions in the minds of the pupils. They told no story and presented no drama other than that which inheres in motion pictures of concrete things, places and actions. They were not entertainment films, though all who viewed them found them exceedingly interesting. They included elements sufficient to enable the pupil to answer such questions as they prompted. The educational value of such questions might easily be impaired or destroyed by putting authoritative answers to them in the films, either in subtitles, in pictures or in diagrams. But in consonance with the wise warning of Professor Kilpatrick against such "vaccination of children against education," the editors of the films have carefully avoided giving *ex cathedra* answers to the questions provoked by the films. It was partly for this reason that the titles were reduced to a minimum. In these films the effort was made to avoid pedagogical tasks which can be better accomplished by other media of instruction.

An Instrument for the Teacher

The fact that these films tell no stories and depict no dramatic sequences similar to those of the entertainment films is of such pedagogical importance as to require special emphasis, because it indicates more clearly than any other single feature of these films, the place the present experimenters consider motion pictures ought to have in the classroom. In the theater film we have a self-contained and complete unit, having a definite beginning and having a still more definite and satisfying ending, which tends to discourage further thought about the matter on the part of the audience. The classroom film with which we are here concerned is not a self-contained unit carrying its own story which the pupil is to receive passively. Least of all is it a story that has a definite and satisfying end. On the contrary, it is an instrument that the teacher is to use, not a substitute for the teacher, for textbooks, for maps, for

drawings or for other time-honored instrumentalities of the classroom. Far from putting an end to the interest of the pupil, it is designed to provoke questions rather than answer them and is intended to leave the pupil at the end of the film with so many insistent questions in his mind and with so much concrete and detailed content that the end of the picture will be, in effect, the beginning of increasingly satisfying effort on his part to interpret his own experiences and answer his own questions.

Teachers Taught to Operate the Machines

No characterization of the films used in this experiment would be complete without observing that they are on safety stock of the 16 mm. size film. The machines to be used in the experiment were installed in the various classrooms of the X teachers in twelve cities, from one to three weeks before the experiment actually started. An expert operator met the X teachers in each of the cities and gave them detailed instructions as to the mechanical structure and method of operating the machine. The period of such instruction for each group was perhaps two hours. Conveniently arranged window shades for darkening the X teachers' classrooms were installed.

Among the distinguishing characteristics of this experiment in the field of visual education may be mentioned first the pedagogical nature of the films described above. In the second place, the experiment involved enough film material and continued over a period sufficiently long to make the contribution of the films a large enough fraction of the total life experience of the individual for that period to be measurable.

In the third place, these films became an integral and regular part of the curriculum and of the classroom procedure, so that in our comparisons we are concerned with the contributions of a normal classroom and curriculum agency and not with a novelty.

In the fourth place, this experiment involved a large number of pupils in the six school grades, from the fourth to the ninth inclusive, scattered in a dozen cities, taught by nearly 200 different teachers in about seventy-five different schools.

The written tests used in measuring the relative attainment of the X and C groups in this experiment were based strictly upon the areas of learning delimited by the study guides, and were parallel for the two courses of study. The tests in geography and general science were of two general types. The first type, hereafter called comprehensive tests, included three subtests,

which are hereafter called Tests C 1, C 2 and C 3. Test C 1 consisted of 100 true-false statements and was given only at the beginning of the experiment. Test C 2 consisted of 100 multiple choice questions given both at the beginning and at the end of the experiment. Test C 3 included approximately 100 two-answer questions and was given only at the end of the experiment.

The main purpose of Test C 2, which was given both at the beginning and end of the experiment, was to measure the relative gains of the experimental and control pupils. The questions in this test emphasized ability to interpret experiences and to make inference and judgments. Test C 3, given only at the end, was designed to measure the ability of the pupils to recall concrete objects and processes, which were included in the study guides and were also pictured in the films. The second type of test used, hereafter called topical tests, was a modified form of the traditional essay examination which is subjectively scored. The topical tests were given approximately every two weeks during the experiment. Each of these tests included about eighteen questions and covered the subject matter of two topics.

The comprehensive and topical tests constituted two independent series of tests, the first having been in charge of one of the directors in New York City and the second in charge of the other director in Chicago. The questions in each part of both series of tests were about equally divided between the ten topics in each course of study.

Handicaps of the Experimental Group

The initial comparison of the X and C groups shows that the X group started the experiment with the following handicaps:

1. The average intelligence score of the X group was inferior to that of the C groups to the extent of 20 per cent of a standard deviation in general science and to the extent of about 10 per cent in geography.

2. The average achievement score of the X group was inferior to that of the C group to the extent of 20 per cent of a standard deviation in general science and to the extent of about 10 per cent in geography.

3. Slightly larger proportions of the X groups than of the C groups were in lower school grades, notably in general science.

4. The proportion of girls was greater in the X than in the C group in general science. Since the girls gained less than the boys this constitutes a small handicap for the X group in general science.

5. The numbers of pupils per class were about the same in the X and C groups in both general science and geography.

6. The available evidence indicates that the X teachers were not superior to the control teachers. The necessity of adjusting their teaching to an unfamiliar mechanism may have constituted a slight handicap for the X teachers.

7. There is abundant evidence that the control teachers exerted themselves energetically throughout the whole experiment to overcome the advantage they supposed the films gave to the X teachers.

8. A few of the X teachers, especially in general science, leaned too heavily upon the films and thus handicapped their classes.

9. Many control teachers gave their pupils extensive practice with the types of tests used in this investigation. Only a negligible number of the X teachers gave their pupils the advantage of such practice.

Summarizing the Final Comparison

The final comparison of the X and C groups may be summarized as follows:

1. At the beginning of the experiment the X group in general science was inferior to the C group both in intelligence and in general science achievement to the extent of about 20 per cent of the standard deviation of the intelligence and the achievement test scores, respectively. At the end of the experiment the X group had gained 1.76 score points more on Test C 2 than the pupils of the C group. This difference in favor of the X group is 14.5 per cent of the standard deviation of the scores of both X and C groups, and is 11 per cent of the average gain of both groups. In other words, 60 per cent of the X group in general science gained more than the average gain of the C group, and only 38 per cent of the C group gained as much as, or more than, the average gain of the X group.

2. At the beginning of the experiment the X group in geography was inferior to the C group in both intelligence and achievement in geography, to the extent of about 10 per cent of the standard deviation of the scores on intelligence and geography achievement tests, respectively. At the end of the experiment the X group had gained 3.8 score points more on Test C 2 than the pupils of the C group. This difference in favor of the X group is 33.2 per cent of the standard deviation of the scores of both X and C groups and is 17.9 per cent of the average gain of both groups. Stated in another way, 72 per cent of the X group in geography gained more than the average gain of the C group, and only 29 per cent of the C group gained as much as, or more than, the average of the X group.

3. In general science the X group gained more

on Test C 2 than did the C group in eight of the twelve cities.

4. In geography the X group gained more on Test C 2 than did the C group in eleven of the twelve cities.

5. In Test C 3 given only at the end of the experiment, the average score of the X group in general science was superior to that of the C group by 78.2 per cent of the standard deviation and by 11.8 per cent of the mean of all X and C scores.

6. In geography, the Test C 3 average score of the X group was superior to that of the C group by 84.5 per cent of the standard deviation and by 15.6 per cent of the mean of all X and C scores.

7. In both general science and geography, as measured by Test C 3, the X group in each of the twelve cities excelled the C group.

8. In a minor experiment one teacher taught both an X and a C class, carefully matched as to intelligence. The X class excelled the C class in gain (Test C 2) by 68 per cent of the standard deviation of all X and C scores in all cities.

In an investigation of the merits of a teaching device the considered judgments of the teachers using it must be given considerable weight. A questionnaire including ten questions was submitted to the X teachers about the eighth week of the experiment and was answered by 87 (93 per cent) of the 93 X teachers. The results of the questionnaire are considered reliable and significant (a) because the teachers who answered had had seven or eight weeks of experience with the teaching films; (b) because the teachers understood that their answers would be treated in a strictly confidential way; (c) because the answers were not all favorable; (d) because there was fairly general agreement between the answers of teachers in different cities; and (e) because many of the answers were supported by citations of concrete evidence.

Teachers Find Films Effective

A tabulation of the teachers' answers to each of the ten questions of the questionnaire shows that the teachers are overwhelmingly convinced that the teaching films were highly effective in arousing and maintaining interest; in increasing the quantity and quality of the reading, project work, classroom discussion and writing; in promoting a more thorough correlation of the materials on the part of pupils; in increasing the richness, accuracy and meaningfulness of their experience; in facilitating the work of the teachers in organizing the lesson materials and in making teaching more pleasant and the self-activity of the teachers greater.

Several of the answers were classified by us as adverse, but analysis of the answers shows that in no case are they unfavorable to the use of motion picture films in the schools. The adverse answers are almost without exception objections to the particular organization of the film instruction prescribed by the directors for the particular purposes of this experiment.

A considerable number of answers were classified as favorable, but were qualified because while endorsing the use of classroom films they include complaints that the time allowance for the use of the films was not adequate for exploiting fully the ardent interest aroused in the pupils by the films.

Film Classes Superior in Achievement

A careful analysis of the X and C teachers' reports made after giving instruction on each topic indicates (a) that the general level of teaching ability and practice was about equal in the X and C classes; (b) that the C teachers exerted themselves energetically and put constant pressure on their pupils to make a good showing on the tests; (c) that the C teachers gave their classes extensive practice with the types of tests used in this investigation; (b) that the C teachers used visual aids other than motion pictures extensively; and (e) that in several instances, notably in general science classes, the X teachers leaned too heavily upon the films.

An extensive collection of exhibits of the project work of the X and C pupils in all twelve of the cooperating cities shows that much excellent work of this sort was done by both X and C classes. The collection does not afford a basis for comparing X and C pupils either as to quantity or quality of projects completed but from other sources we infer that the X pupils were slightly superior in project work.

Thus all the evidence, whether derived from tests or from the judgments and reports of teachers or from our own observations, indicates that in spite of measurable handicaps the film classes were superior in their achievement and attitudes to the nonfilm classes.

This investigation has in no way been more fruitful than in suggesting promising leads for further research. Indeed the field for research in classroom films is almost limitless, and we can do little more than suggest some of the more insistent problems that are faced by the makers and users of classroom films. Two classes of problems will be mentioned. First let us consider the large group of semi-technical and pedagogical problems that should receive the early attention of research scholars:

1. The pedagogical structure of a film or of a

series of films and the organization of the film into the lesson plans of the course of study and into the classroom exercise.

2. Length, frequency and character of subtitles in various types of films and for children of various ages and grades.

3. The place of animated diagrams in various fields of study.

4. Adaptation of film instruction to various age and grade groups.

5. Adaptation of a given film to various courses of study.

6. Combination of slides and other visual media with motion pictures.

7. Repeated showing of the same film and of its parts.

8. Time allotments to various types of films and film sequences.

An important administrative problem is already looming large before many school superintendents and principals and deserves immediate attention, namely, the organization, administration, housing and care of the film library of the individual school and of the city school system.

Adapting Films to All Types of Teaching

In addition to these problems, of common interest to most school groups, there are several questions of special significance to certain school interests. Teachers of English have long looked upon the screening of classic stories and novels with interest. It is recognized that the influence of such pictures on the literary interests, tastes and activities, upon the speech and writing of children deserves extensive research. More recently a promising avenue has opened up for the possible use of classroom films in the teaching of English composition, narrative, descriptive and expository. The adaptation of classroom films to the needs of special school classes, such as classes in institutions for the deaf and dumb, raises many special problems of subtitles and animated diagrams. The use of slow motion pictures in various training problems and in scientific research suggests vast possibilities for interesting and valuable research. The promised early solution of the mechanical and technical problems of sound and color photography will open up a new and unmeasured field for many types of research.

A second group of problems includes a host of general and semi-sociological questions that are of especial interest to the educational philosopher. No attempt can be made here to suggest even a partial list of them. Many such questions are concerned with the intimate reactions of the pupil to the film and its component scenes and units. Analysis of the intellectual, esthetic and

emotional reactions of classes and of individual students of various types, ages and backgrounds to specific elements in films and in film sequences, will offer the surest foundation for increasing the educational values, economies and adaptabilities of classroom films.

In such research the most important desideratum is to keep the experimental and control subjects under observation for a long period of time. The immediate reactions of children are important but the enduring contributions of the films, and the form in which they ultimately manifest themselves in the conduct, habits and attitudes of children, constitute the prime interest of the classroom film investigator. Some of the possible remote effects on children of seeing good films in the classroom several times a week should be particularly enticing to those interested in educational and social research. The rich and concrete foundation for thinking provided by good classroom films throughout the elementary and secondary-school years may lead to such sound habits of study and thought on the part of children as to reduce materially the often lamented preoccupation of pupils throughout the whole educational ladder, from grade school to university, with the empty generalizations and *a priori* verbalisms that now constitute too large a part of their intellectual pabulum and that exercise too exclusive a domination over their habits of thinking. Nor is it too far-fetched to suggest that constant and profitable study over a series of years with good films, which challenge the esthetic no less than the intellectual resources of children, may slowly and unostentatiously but surely develop in them such deeply set criteria of merit and good taste as to help solve, in the only way it can be solved, the social problem created by certain types of amusement films whose currency is deplored both by anxious parents and by the best elements in the theater film industry itself.

The Classroom Film—A Social Agency

The present investigation has been concerned with the contribution of twenty films to the ordinary outcomes of classroom exercises as these are usually measured, observed and estimated. We believe that the teaching film experiment has uncovered only a small part of the film contributions, but that the demonstrated contributions amply justify the extensive use of films in our schools. It seems likely that most of the research in the field of the classroom film that may be undertaken in the next few years will be devoted largely to the more or less immediate classroom products and pedagogical problems created by such films. Such research is much needed, and

will make contributions of indispensable value.

But the classroom film is or will be a social agency whose power will be felt far beyond the walls of the classroom and whose effects will be far too variegated and subtle to be measured or described by the types of tests, examinations and observations currently used in the classroom. The potential power of the classroom film as a part of the daily experience of the elementary and secondary-school population, is amply indicated by the fact that the entertainment film has left no element in our social or individual life untouched. The theater film, specifically designed to entertain people while within the walls of the theater, has revolutionized our ideas, manners, customs, tastes and morals. It makes and unmakes overnight the vocabulary of vast sections of our population, and it instituted a gigantic worldwide system of adult education long before the phrase was current in learned circles. The educator may properly inquire first about the immediate classroom contributions of films, but he will err if he bases his judgment solely on the evidence of such contributions. In the classroom film we envisage an agency whose potentialities are easily underestimated.

Self-Help Students Earn \$33,000,000 Annually

Nearly all colleges and universities in the United States make some provision for the student who must work his way through college. Results of a recent survey reveal that 763 colleges and universities which keep records of this activity, estimate that 46 per cent of the men and 23 per cent of the women are earning part or all of their way through college. These institutions enroll 84 per cent of all college students in the United States. The small colleges that keep no records of self-supporting activities make general estimates that "a large number," "a high percentage" or "a great many" students are employed on the campus or in the town during term time. Where student employment bureaus are established fairly accurate estimates are usually available.

The Educational Directory for 1928 lists 1,068 higher educational institutions with enrollments totaling 878,088 men and women students. In these colleges and universities about half of the men students and a fourth of the women students are contributing to their own support by working part time; about a fifth of the men and over a tenth of the women are entirely self-supporting. Self-help students earn approximately \$33,000,000 annually.

Index Numbers for School Supply Prices

The price of products depending upon textiles and metals will probably remain about the same or may tend to rise slightly

BY HAROLD F. CLARK, PROFESSOR OF EDUCATION, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, AND
JOHN GUY FOWLKES, PROFESSOR OF EDUCATION, UNIVERSITY OF WISCONSIN

CONFORMING rather closely with last month's prediction that there would be no great change in the paper market, the price of this commodity has remained fairly constant. Although there has been a sharp decline in the price of paper during the past year, it is believed at the present time that this decline will not continue very much farther.

However, the best authorities seem to think that almost all branches of the paper industry have much larger industrial plants than are necessary. This factor might easily lead to overproduction and hence to lower prices at any time.

The price of products depending upon textiles and metals will probably remain about the same or may tend towards a slight upward movement.

During the past seven months an index for school supply prices has appeared in each issue of *THE NATION'S SCHOOLS*, and throughout that entire period of time the market has followed rather

closely the prophecies set forth in the index. Since the possibility of overproduction indicates a possible drop in the price of paper it would be advisable not to buy in larger quantities than are needed for use in schools in the immediate future.

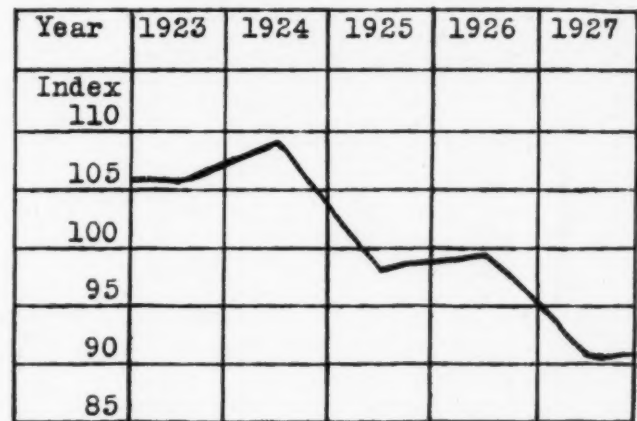


Chart II. Annual index of the prices of instructional supplies.

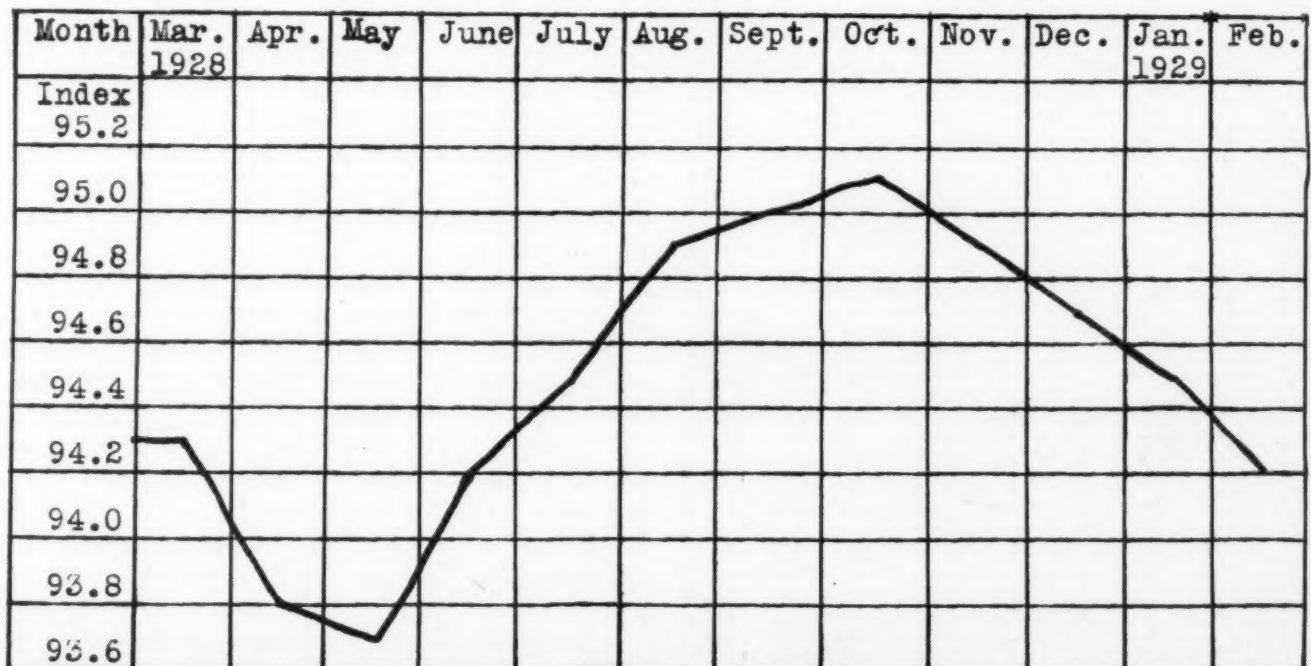


Chart I. Monthly index of prices of instructional school supplies. January and February indexes are not final.

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Editorials

Promoting International Good Will by Student Visits

MOVEMENT is gaining momentum among progressive nations to cultivate international understanding and sympathy through international student visitation. Statesmen appreciate that the peoples of different countries can understand each other and appreciate the ideals and problems of one another only as their young people are helped to gain an international point of view.

Adults who are brought up to believe that all nations except their own are greedy, underhanded, malicious and treacherous cannot be expected to take the point of view of any other people when a controversy arises. But if young persons can have an opportunity to see foreign peoples in their respective native countries and if they can participate to some extent in their ideals, there is a good chance that international misunderstanding, suspicion and hatred can be discouraged. This view is responsible for the interest that is now being manifested in Germany, France, Japan, Canada, America and other countries in the exchange visits of students.

One of the significant events of the times is the exchange of student visits between France and Germany. This is apparently the beginning of a better understanding between these two age-old enemies. It is reported that the French students were warmly welcomed in Germany and the German students were as warmly welcomed in France. Similarly, German students and teachers are visiting Ireland, and it is probable that groups of teachers and students will visit other countries. A group of Japanese students is now in America for the purpose of observing our institutions and our modes of life, and they will carry back to Japan a knowledge of American civilization. A large group of Canadian teachers and students is visiting France and England. American students are constantly going to European countries for observation and in some cases for prolonged study in European universities. We have now in this country a considerable group of Rhodes scholars who have become thoroughly familiar with English life and institutions. Our great educational foundations are establishing scholarships so that foreign students may come to America and remain for a number of years studying in one or another of our educational institu-

tions and observing our social, political and moral ideals and practices.

One way, probably the best way, to promote peace among the nations is to develop an understanding of national ideals and problems. The plan of international student visits should be greatly extended. There are some critics of the plan who maintain that we want to preserve our own institutions and modes of life without regard to any other peoples in the world. Foreigners are anathema to these bigots. They say that they do not want any of our young people to become infected with foreign notions. If our youth cannot go to England, France, Germany, Italy, Spain, Japan or any other country for a visit and retain their American ideals and practices, then there must be something transitory about their ideals.

We need not be afraid of orientalizing or Europeanizing America by sending our young people to the Old World to observe manners and customs. The chances are that they will come home more strongly imbued with American ideals than they were before they visited foreign countries.

Training Teachers While in Service

WE ARE about ready to abandon the notion that we can in a normal school, teachers' college, college of education in a university or in any other training institution, prepare young people adequately for teaching.

The old saying that one learns to do by doing applies as fully to teaching as to any other art. The most that a candidate for teaching can accomplish in a training institution is to have his eyes opened to the more significant factors concerning the nature of childhood and youth and to the ways and means of helping those he teaches to gain control of their impulses and to attain more complete adjustment to the social and physical world in which they live. The processes of instruction, guidance and management of a group of children, however, cannot be acquired in an expert way and in detail in any other place than in the classroom and by actual teaching.

Becoming convinced of this fact, the University of Wisconsin has established an institute for the training of teachers. One division of this institute has for its function the continuance of training in service. This institute's plan of training teachers assumes that institutionalized training of teachers is inadequate. The professional schools, such as engineering, law and medicine, have already provided supplementary training in service—for example, the internship in medicine. Germany—as an illustration of the practice

among European countries—has recognized the advantage of training in service by requiring two "proving-up" years of work done in the field under careful supervision.

Responsibility for the follow-up work of the University of Wisconsin is lodged in a regularly established supervisory service bureau. The purpose of this bureau is to help teachers in every practicable manner. The bureau is equipped to serve in four different ways:

1. Departmental specialists are ready to spend a day with a new teacher in order to serve in any capacity that may be of practical assistance.

2. The bureau has established a correspondence service that supplies information, courses of study, bibliographies and assistance on specific problems.

3. Bulletins are issued from time to time dealing with concrete problems in the schoolroom, such as "The Improvement of Written Examinations."

4. The bureau conducts a continuous survey of the teaching difficulties of beginning teachers to serve as a basis for a more helpful program for the training of teachers in service.

The following questionnaire is sent to all beginning teachers, and interesting and helpful data that furnish a basis for service rendered to novices in teaching are secured:

1. List specific teaching difficulties met the first two weeks (arrange in order of difficulty).

2. List specific teaching difficulties met the first year (arrange in order of difficulty).

3. List phases of teaching that continue in difficulty after the first year (arrange in order of difficulty).

Adapting Instruction to Individual Differences

THE school must play an increasingly important rôle in the training of the young. The social changes that are taking place are making it increasingly difficult for the home to provide suitable conditions and facilities for the proper education of the young. Our people are crowding into congested centers; homes are becoming cramped; space about homes for children's play is fast disappearing and has completely disappeared in most cities; the social demands upon the home are becoming increasingly exorbitant; a mother does not have as much time or energy now to devote to the training of her children as she had when life was much simpler than it is to-day. Traffic on the streets is making it impossible for children to play on them. The only

places in modern life that are being preserved for children are the school and the playground.

The home will, in the near future, release children as early as the third year so that they may attend a nursery school for three or possibly four hours daily. These schools will supplement the home in caring for children and training them in habits of orderliness, self-control, obedience, cooperation, self-reliance, courage and cheerfulness. It will be of advantage to the mothers, as well as to the children, for the nursery school to begin to train children as early as the third birthday.

In America we are launching upon a program of classifying and treating children according to their natural endowments and their needs. Parents should understand and be guided by the fact that some children possess mental ability superior to other children. It is of the greatest importance that we discover gifted children early, and provide opportunities for them to develop their talents to the utmost. We will not much longer keep gifted children and backward children in the same class, and teach them in the same way. We propose to apply intelligence, educational and vocational tests early in childhood in order to discover in what directions individual children develop to best advantage. Then we shall adapt educational training to the talents and the needs of each.

Train a Child According to His Ability

It is the aim of educational leaders in America to-day to give every pupil the special training that will enable him to be of greatest service to his community and so to get the most out of life for himself. Heretofore, all pupils have been put through substantially the same course of linguistic, symbolic and abstract study in the belief that this sort of training was more cultural and disciplinary than any other kind. This has resulted in unfitting a considerable proportion of our children for the needs of daily life. When parents understand the situation, they will agree with teachers that it is a mistake to train a child of inferior ability in abstract intellectual pursuits for a career demanding abstract intellectual ability.

Throughout our country educational programs are being extended in every direction. The expense of the programs has increased at a rapid rate. Everywhere an effort is being made to provide opportunities for young people to secure a free education through the teens. In order that our vast educational facilities may be utilized to the greatest advantage, pupils must come to the school eager to secure the benefits that can be derived therefrom. They must not come with a blasé or sophisticated attitude. They must remain

docile, teachable and enthusiastic in the pursuit of knowledge in the elementary and high school.

But modern life tends to rob children early of simplicity, docility and enthusiasm for intellectual work. Commercialized amusements and the swift pace at which we are living tend to overstimulate the young, and to make them feel that the life of the schoolroom is too unemotional and commonplace for them to be interested in it. The home must play the principal rôle in protecting its children from too exciting and stimulating experiences, so that they may enter the school feeling that they can gain real pleasure from a mastery of intellectual tasks and so that they will not be hankering constantly for emotional excitement and gratification.

Should Teachers Be Burdened With Extra-School Duties?

"FAITHFUL Reader" of The NATION'S SCHOOLS writes to the editor for his opinion concerning this question, "Is a superintendent of schools justified in asking every teacher in his force to visit the home of each pupil in her class at least twice each year?"

If the superintendent were justified in issuing this edict to his teachers, every teacher in the elementary schools would make from eighty to ninety home visits a year. If each visit lasted a half-hour and it required a half-hour en route going and returning, this would make a total of, let us say, ninety hours or eighteen full working days spent in visiting homes. The question now is, "Can a superintendent legitimately and conscientiously impose upon every teacher in his force eighteen days of work in addition to her proper and necessary duties in the classroom?" The answer is, that he cannot do so unless he can think of some way to lighten the burden of classroom instruction and management.

Would it not be a good rule to require teachers to attend to every duty essential for the highest success in their work in the classroom, but not to require anything whatsoever outside? If a teacher should spontaneously choose to make home visits, it would be so much to the good; but the initiative and decision should come from her and not from on high. The advantage of home visits might be pointed out in a meeting of teachers, but official pressure ought not to be applied to compel any teacher to do eighteen days of work outside of the classroom. After all, a teacher has a moral right, and she ought to have a legal right, to use her time outside of the classroom as she wishes to do, it being understood that she will not behave

contrary to the social and moral ideals and customs of the community.

Some may not agree with the opinion that has been expressed. But such readers are asked to consider whether, when a teacher signs a contract to instruct young people in a community, she at the same time obligates herself to devote her time and energy without any reservation to extra-school service. I know that some people hold that a teacher belongs *in toto* to the community in which she teaches; the insistence upon this view on the part of school officials has been one cause why teaching has not been the most popular of the professions. Going into teaching in many places has been equivalent to taking the veil, because it meant that the teacher had become a servant of the community in its varied needs and moods as well as an instructor of its children.

Teaching Films Have Arrived

READERS of this department of THE NATION'S SCHOOLS know that we have been predicting the general use of motion pictures in teaching. We have said heretofore that there is hardly a subject taught in the elementary or secondary schools that could not be illuminated and vitalized by the use of motion pictures. Our predictions are apparently coming true. Actual experiments in classrooms have demonstrated the practicability and value of films in teaching certain of the subjects found in every course of study. In this issue of THE NATION'S SCHOOLS Professor Wood describes the experiment with teaching films.

The results of this experiment should convince any school executive or teacher that motion pictures can be employed to supplement and enrich classroom work, probably in all subjects of instruction. The experiment as described by Professor Wood, has not covered all subjects of instruction, but the subjects that have not been treated experimentally are probably no more difficult to film than are the subjects that have been successfully presented in this way.

There is probably no doubt in the minds of school people that visual aids in teaching assist in amplifying and making accurate knowledge gained through verbal or objective presentation. Ever since the days of John Locke, students of human nature and of teaching have urged those responsible for the education of the young to employ ways and means to supplement words used in teaching with concrete objects or activities. American teachers particularly have been thinking up all sorts of devices to bring their pupils into contact with realities. Teaching films

will help greatly to solve the problem of concrete instruction, which has perplexed teachers ever since they became convinced that a novice cannot make headway in intellectual growth through verbal mediums only. The film experiment has shown satisfactorily that when a learner can see the objects, phenomena or relations which he is trying to learn, he can grasp them more readily and accurately and retain them more successfully than when he is confined to verbal descriptions or even to still pictures.

The experiment was carried out in accordance with present day methods of testing the efficiency of any educational procedure. Experimental and controlled classes have been conducted side by side under the same conditions, except that films were employed in one group of classes while they were omitted in the other group. Then, when the accomplishments of the two classes were measured it became apparent that teaching films played an important rôle in helping pupils to gain a clearer, more extensive and more enduring grasp of the knowledge presented than was gained by pupils who did not have the advantage of the teaching films. The experiment is entitled to the confidence of educational people. What is needed now is to extend the experiment with a view to covering all subjects taught in schools and to make teaching films accessible in every classroom. Details concerning the most effective ways of using teaching films have yet to be considered, but the general principle of their usefulness and practicability has been settled.

"His Word Is as Good as His Bond"

RECENTLY the officers of the junior class in a university were called into consultation with the faculty committee to select a man from the junior class to serve on a commission appointed to take charge of an important university function. It was desired to secure the most capable student in the junior class.

The qualities of several men were discussed. One man was finally selected who would not have been chosen by the faculty committee acting without the advice of a student group, for the reason that this man was not prepossessing and was not conspicuous in campus activities. The junior officers, however, were agreed that he was the man for the important post on the university commission. The reasons they gave were: "One can depend absolutely upon what he says." "There is no pretense about him." "He plays in the open so that you always know where he stands." "He never speaks one way and then acts differently."

This quality of dependability, trustworthiness, completely outweighed certain defects in the man's personality. The showy qualities of other men did not count heavily with the junior officers when they had to choose a man for a responsible piece of work.

After the selection was formally approved and the junior officers had withdrawn, the faculty committee remarked upon the positive way in which the junior officers placed dependability above every other quality in ranking the students whom they knew. It might have been supposed that they would have esteemed social prestige or facility in speech or some other conspicuous quality more highly than the rather subtle and undemonstrative quality of trustworthiness. This led the committee to consider whether the faculty of the university rated men on the same basis as the junior officers rated them. Going over a list of members of the faculty, it became apparent that the men who had achieved distinction and who had been placed in positions of trust by their colleagues were precisely the men who had been tried and found dependable. The men who had not impressed themselves upon the faculty as absolutely frank, straightforward, out-in-the-open types were not selected for important university services.

A Fine Old Saying

An old saying that is not heard so frequently now as it used to be is, "His word is as good as his bond." It is to be regretted that this phrase is passing out of our every-day speech, because it places emphasis upon the most essential quality in a man. Everything else is subordinate to dependability. A man may be rough, uncouth, illiterate, ungrammatical, even unattractive in appearance and irascible in temperament but if his word is as good as his bond he is a man despite all his other undesirable characteristics. A man may be polished, well spoken, perfectly groomed, entertaining in social situations and of good appearance, but if he is double-faced or double-tongued he is in reality something less than a man.

When responsible duties are to be performed the roughhewn but dependable man will be selected every time by those who know him because they have confidence in him, they can trust him. He will not fail them in a crisis and will stand foursquare in any situation in which he is placed no matter what pressure is brought to bear upon him to make him play the game underhandedly or deceptively.

How often do you hear one person say of another, "His word is as good as his bond"? Is it

possible that we are coming into an era when we hardly expect people to be absolutely dependable so that we can rely upon what they say no matter what happens? There are signs on the horizon that are not reassuring. They indicate that we may have to deal in this country with the sort of thing that is universal in a number of foreign countries where one cannot place confidence in anything one is told, especially when deception is advantageous.

In these foreign countries the rule of life is, "Do anything you can do if you can get by with it. Never tell the truth unless you gain more by doing so than by telling a lie. It would be silly for a man to follow a program of daily life in which he would always be straightforward and frank and out in the open." You have to be on the alert all the time to protect yourself against cheaters and blackmailers and adventurers and adventuresses. To an American who is accustomed to dealing with people on the ground that their word is as good as their bond, a life of deception and suspicion in which no one trusts anyone else is horrible and contrary to the wholesome instincts of our countrymen.

We must do everything possible to exalt trustworthiness, straightforwardness, dependability. We had better sacrifice everything else, if we have to make sacrifices at all, than lessen the importance that we attach to these qualities. Of course it is not to be assumed that in order to be dependable one must be rough or uncouth or lack social graces; but it would be possible to dwell on these latter superficial traits to the neglect of real stamina.

Playing Up the Dependable Type

One hears it said to-day in high schools and colleges all over the country that we are tending to develop an effeminate type of man who is proficient in the arts of the ballroom and the tea room but who is anemic in respect to the masculine quality of dependability. It has happened in other countries that men have put superficial attainments above the elemental masculine quality of straightforwardness and rugged frankness. We must be on our guard that such a calamity does not overtake us in this country. In showing favors to our associates we must play up the dependable type even if he does not possess conspicuous traits that attract the favorable attention of superficial persons. We must do what the junior officers did when they were called upon to choose a man out of a class of 1,500 students for a responsible position—we must place trustworthiness on a higher level than mere external accomplishments.

Your Every-day Problems

JOHN GUY FOWLKES, THE UNIVERSITY OF WISCONSIN, DIRECTOR

This department will be devoted to an informal discussion of problems arising in the every-day life of principals and superintendents. The following are excerpts from letters that have been received recently by the director of this department. Similar inquiries are invited, and should be addressed to Dr. John Guy Fowlkes, Department of Education, University of Wisconsin, Madison, Wisconsin.

Allocating the Operating Expenses of a School System

For some time there has been a good deal of question concerning the allocation of operating and maintenance expenses in connection with the general administration of a school system. Inasmuch as several superintendents have inquired recently concerning whether or not operating expenses for the board of education and the superintendent's office should be charged to general control or operating expenses, the question seems worthy of consideration at this time.

After all, accounting is simply the identification of business transactions and the proper allocation of such transactions. In identifying and classifying business transactions, either a functional service or fiscal transaction may be used as a basis for allocation. The possible functional bases of a local school system are administration, supervision, instruction, coordinate activities and auxiliary agencies, while the fiscal bases are building operation, building maintenance, fixed charges, debt service and capital outlay.

A Revision of Accounting Terms

Obviously, money spent for either or all of the five fiscal purposes may easily be and as a matter of fact are spent for one or all of the five functional divisions of a school system. Consequently, it is necessary both in terms of logic and the experience and testimony of business managers to maintain the two five-fold bases of classification, arriving at expense cost studies by means of coding or the keeping of special accounts. If such be the case, it is plain that there is no more good reason for isolating operating and maintenance costs of the administration building than there would be for isolating costs for fixed charges, debt service and capital outlay that go to general control.

Such a point of view immediately questions many practices that are employed at present in accounting for school monies and if the principle suggested here is sound, a revision of practically all accounting terms and procedures will be necessary.

What a Supervisor Should Know and May Do

Despite the appearance of various materials concerning the training and functions of supervisors, many inquiries are made as to what a supervisor needs to know and as to the methods and activities a supervisor may best employ. Before an intelligent analysis of qualifications and duties of a supervisor may be determined, it is necessary to have a satisfactory, working definition of supervision.

It seems to me that supervision may best be defined as the stimulation, direction and evaluation of teaching. Obviously, the major activities may be classified under an indefinite number of categories. In formulating a supervisory program, it may prove helpful to have the group recommendation of principals and superintendents concerning the necessary qualifications and possible activities of supervisors.

The following material is the recommendation of a class in elementary-school administration concerning what a supervisor should know and may do.

The supervisor must know: the psychology of learning; the psychology of children; the psychology of teachers; the technique of teaching; the objectives of each subject; the objectives of supervision; the underlying principles of supervision; the principles of school management; tests and measurements and special methods that apply to each subject.

The supervisor may accomplish his purpose by:

1. Sending out printed material, this to include suggestions for the first day of school; suggestions on school management such as light, temperature, ventilation, register, reports and records; time outlines adapting the general course of study to local conditions, texts and materials in use; samples of daily or weekly lesson plans; instructions on the use of tests—standard, informational, true-false, multiple choice; factors to be taken into consideration in "marking"; a self-rating score card.

2. Group meetings: Problems discussed should be of interest to the entire group; summaries of conclusions should be mimeographed and sent to the entire group; meetings should be an opportunity and not a requirement; adhere to the time schedule; do not criticize technique or behavior at the meeting; the ratio of teacher activity to supervisor activity is a fair measure of the value of the meeting; the meeting should be a forum for discussion of classroom methods and problems.

Suitable topics for discussion could include:

- a. Careful analysis of the course of study.
- b. Demonstration teaching.
- c. How and what to observe on visiting days.
- d. Standard tests.
- e. Study and discussion and remedial work following standardized tests.
- f. Special types of lessons, problem, project.
- g. Studies of classification and marking.
- h. Types of classroom tests and examinations.
- i. Study of promotion such as age-grade problems and mental age-grade problems.
- j. Individual differences, low and high mentality.
- k. Discussion of reading circle work.
 - l. Lesson planning and preparation.
- m. Standard of accomplishment in each grade.
- n. How to study.
- o. Study period, supervised study.
- p. Socialized recitation.
- q. Home work.

3. Classroom visitation: Begin classroom visitation on the first day of school; visit as often as possible but have a definite plan of supervision; formulate a technique of supervision in the classroom; utilize the conference to best advantage.

The following classroom technique should be observed:

- a. Enter and leave the classroom quietly.
- b. It is usually better to sit behind the pupils.

- c. Use a printed score card or evaluation sheet.
- d. If you have explained the evaluation sheet to the teachers and allow them to read it after the recitation, it will do no harm to make notes.
- e. Be pleasant with teacher and pupils.
- f. Observe with attention and enter into the spirit of the recitation.
- g. Supervision of less than a class period has little or no value.
- h. If a series of recitations is to be observed, ask the teacher if she would like to have you teach any special class. This procedure gives the supervisor time for preparation.
- i. While observing the recitation make a study of the personality of the teacher. It will help you in the conference.
- j. If the teacher seems to be in difficulty and needs help, move forward quietly and suggest in an undertone the right procedure.
- k. With the permission of the teacher, the supervisor may ask pertinent questions of the class either during or at the close of the recitation.
 - l. If it is plainly to be seen that the teacher is making a failure of the recitation or is teaching untruths, take the class. Always ask permission first.
- m. The supervisor should observe the time and turn the class over to the teacher in time for the assignment if it has not already been made.
- n. Be calm, and learn to smile when things are going wrong.

The conference should be the means of discovering effective ways of helping the teacher.

- a. Keep in mind that you are there to help the teacher and not to state the findings of your inspection.
- b. Let the teacher know that you are diagnosing the recitation for the good of the pupils only.
- c. Begin the conference by complimenting what was good.
- d. Both the teacher and the supervisor should be seated and not hurried.
- e. One complete recitation carefully observed and written up is enough for one conference. Mention just the outstanding good and bad points of the others.
- f. Discuss all errors and corrections on impersonal, scientific grounds. Give pedagogical and psychological arguments and always give the correct procedure.

- g. The consultation should be a discussion and not a monologue by either the teacher or supervisor.
 - h. The discussion should not take place in the presence of the pupils.
 - i. Leave a copy of your suggestions for the teacher and file a copy for future reference.
 - j. Save some complimentary remarks for the close of the conference.
 - k. Conduct the conference so that the teacher may truthfully say, "Come again, soon."
4. Tests and measurements: The supervisor should have a definite testing program. Such a program may be used by the supervisor:
- a. To determine the general mental ability of each child.
 - b. To determine the accuracy of grade placement.
 - c. To determine the necessity for special rooms and vocational guidance.
 - d. To follow the progress of different grades and classes.
 - e. To diagnose weaknesses in any subject.
 - f. To guide remedial instruction.
 - g. To aid in investigating the relative values of various teaching methods.
 - h. To determine the causes of differences between classes.
 - i. To make accurate comparisons between grades, buildings and systems.
 - j. To get convincing facts for the school board.
5. Working with the community: organizing and helping with parent-teacher associations; preparing publicity matter for the newspapers; visiting homes and advising with parents; active membership in organizations for community improvement; special addresses on educational subjects; cooperating with health and law enforcement officers.

Paying for a College Education on the Installment Plan

Students who desire to finance their college education on the installment plan have many opportunities to borrow money, go to college, graduate, and afterwards repay their loans in a business-like manner.

In 282 colleges and universities, funds totaling nearly \$4,000,000 are loaned annually to students of character and ability for the purpose of completing their college education. Although these

funds are administered by the several institutions, there is no uniformity as to the manner in which they are handled. Various conditions are imposed according to the policy of the institution—the need of the student and ability of his parents, locality, restrictions imposed by donors and other factors. In some cases no interest whatever is charged, while in others the rates run as high as 8 per cent, but 6 per cent is the usual requirement. Individual loans average \$100 to \$150 and many are twice as large. Repayment generally begins at a stated period after graduation.

Besides these institutional resources, there are many educational loan funds maintained by independent agencies to aid boys and girls in college. These funds are administered by their respective organizations and some are restricted to students attending specified or affiliated colleges. Some of the funds, established years ago by subscription or collection, have been administered in such a way that the original amounts have been increased many times over. Some, new within the year, are not yet organized to aid the number of students they will eventually serve.

Observing the Modern Elementary-School Principal at Work

Six outstanding characteristics of the modern elementary-school principal, according to Frank W. Hubbard, assistant director of research, National Education Association, are:

He may be found at work among teachers and pupils.

His teachers receive practical aid and vital inspiration. He considers the failure of a teacher as a reflection upon his supervisory skill.

He welcomes the advice and suggestions of others. By delegating simple responsibilities, he develops his associates and secures more time for the major work of the school.

He knows that professional leadership depends upon continuous study and research. He admires the achievements of students of education and uses new knowledge in improving his every-day work.

He knows that many routine duties are necessary, but subordinate to the technique of improving instruction. He seeks constantly to increase the number and quality of his supervisory activities.

He is never satisfied. In the principalship he has a constant challenge to help teachers and pupils with their work.

Current Educational Pressures

A Review and Critique of the Cleveland Convention

BY PROFESSOR M. V. O'SHEA, EDITOR IN CHIEF, THE NATION'S SCHOOLS

ANY meeting of the Department of Superintendence and allied organizations is a sort of barometer of currently important educational interests and issues. Administrative problems loom up more ponderously than problems concerning the content of education, method of instruction or the nature and needs of childhood and youth, but questions pertaining to these latter pressures are not wholly lacking.

A few years ago the superintendent planned to eliminate from the midwinter conference all discussion not directly relevant to administrative policies and technique, but wiser counsel prevailed so that there is, as a matter of fact, consideration of problems that are not predominantly administrative. The great general meetings concern the pressures that superintendents feel most keenly but many meetings are devoted to nonadministrative discussion and these are as largely attended as the halls in which they are held will permit.

Individualizing Instruction

There seems to be a growing consciousness among the crowds that attend the midwinter meeting that the vital problems of education have to do with the adaptation of educational materials and processes to the needs of individuals of various ages, and with the reconstruction of courses of study in response to changing social, economic and industrial conditions. According to my observation, which extends over a considerable period, an increasing proportion of those who determine educational policies are convinced that the most important pressures in education can be resolved only by unprejudiced, unbiased and critical investigation of the outcomes of educational processes, with a view to abandoning types of procedures based on false psychology or wrong sociology, so that the young have not been adequately prepared to fit harmoniously and efficiently into the life into which they have been cast upon leaving school.

Even once popular subjects of instruction and efficient methods of teaching and of organizing and conducting schools may have ceased to be of much value in contemporary life because of the new order of things industrially, socially and in

every other way. Only a few years ago it was generally thought that educational questions could be settled by mere discussion based principally on sentiment and only secondarily upon accurately secured data. But those days have gone forever and now we ask concerning an advocate of any educational doctrine, whether he be a conservative or a radical, a traditionalist or a reformer. Does he know whereof he speaks? Has he facts upon which to base his proposals? Is he simply repeating popular prejudices or is he setting forth policies based upon data that have not been influenced by preconception or bias or Idols of the Cave or the Den?

More Money Is the Chief Need

The subject that more than any other engaged the attention of the superintendents at the Cleveland meeting related to ways and means of securing funds to defray the increasing costs of education. We must have more schooling and better schooling for all children. One speaker said that the time is rapidly approaching when the public will demand that all who serve it in any capacity shall have completed the equivalent of what we think of as a college education. There was well-nigh universal agreement that all pupils must have more education than can be provided by the traditional elementary school. This means that we must extend and also expand our educational offerings. We must provide for individual abilities and needs, which is more expensive than to impose exactly the same type of education upon all children, as we were wont to do in earlier times.

Not only must our children have more schooling and better schooling than we ourselves have had, but school buildings must be better constructed so as to meet the requirements of efficient teaching, of hygiene and of comfort for both pupils and teachers. School building programs loomed large and perhaps ominously in the discussions at Cleveland. We must have more elaborate equipment in school buildings in order to comply with the standards of efficient teaching universally recognized to-day. Especially, we must have more capable, better trained teachers for every department of our educational system. We must have a medical and nursing staff in

every community and also what might be called sociological workers who can bring school, home and community into accord in the training of the young.

Is it any wonder that education is costing more to-day than it did formerly when one pupil was taught the same thing in the same way as all his classmates were taught and when education was considered to consist largely in learning verbatim the content of textbooks? Every source of data pertaining to education is impressing the need of differentiating school work to some extent in order to meet varying abilities, needs, social conditions and requirements and to equip the young with knowledge, skills and habits that will help them to adjust themselves to the increasingly complex world in which they must live. There is no escape from the conclusion that if we prepare the young according to our knowledge of what they ought to have in order to be of service to society and to adjust themselves harmoniously to their fellows, a considerably larger proportion of the resources of the community, the state and the nation must be expended for education to-day and in the days to come than was necessary in the years gone by. There was not a dissenting voice at Cleveland in respect to this matter.

Many speakers discussed ways and means of inducing taxpayers to provide adequately for a rapidly expanding and enriching educational program. It was agreed that more money can be expended for education than has been expended up to this time, because only about one-seventh of the money saved by our people is being used for education. We have abundant funds for amusements and physical indulgences of all sorts and for the beautification of person, of house and of environment. If our people would only compare expenditures for education with other kinds of expenditures and with the extraordinary accumulation of wealth in our country, they would not think that our schools and colleges are making too heavy demands upon community, state and national resources, although a number of speakers at Cleveland called attention to the fact that the taxpayer is beginning to grumble and is threatening to curtail his contributions for educational purposes.

Publicity Is Essential

No matter from what sources the funds are derived—whether from the community, the state or the nation—the taxpayer must be informed regarding the necessity of providing more generously for education to-day than has been done in the past. Many a speaker at Cleveland said in effect, and the same sentiment was freely expressed in the

lobbies of the hotels, that our educational work must receive more and better publicity, that the layman must be kept abreast of educational and sociological investigation. He must be convinced that his own well-being and the well-being of everyone else depends upon the enriching, extending and expanding of the educational program, which is possible only if adequate funds are provided. One thing seems certain—we cannot permit costs for schooling to increase unless the taxpayer can be made to see and understand what education is all about and why it must absorb a considerably larger proportion of community, state and national resources than was necessary in an earlier day.

It is not to be inferred that education has been seriously hampered yet because of the policy of retrenchment adopted by taxpayers. On the contrary, reports throughout the country show that laymen have supported educational work handsomely in providing new buildings, adequate equipment and well equipped teachers for modern, comprehensive educational programs. But everywhere there are signs that the limit of generosity on the part of taxpayers will be reached unless through effective publicity they can be led to appreciate that in our country education must have an increasingly larger budget because it has a much more elaborate and important task to perform to-day than at any time in the past.

Articulation of Educational Units

Probably most readers of *The Nation's Schools* can remember the time when the elementary school constituted the principal unit in our educational system. It was expected that all but a very small proportion of the rising generation would terminate their educational career upon having completed the eighth grade. Here was a clearly defined unit. It was not necessary to articulate it with the high school or the college because most of the pupils would never have any contact with higher institutions. The high school was quite well articulated with the college because it prepared directly therefor. Now, everything is changing. Pupils are not stopping with the elementary school. The high school is working out its own program with but slight regard to special or arbitrary college requirements.

How then can these units of our system be articulated so that a young person may move through all of them without abrupt or violent change along the route? This important problem received prolonged attention at Cleveland. Everyone who participated in the discussion took it for granted, if he did not explicitly so state, that the units of our educational system should be so

closely knit together that a pupil could pass from one to the other, hardly knowing that he was making the transition. The junior high school is bridging the gap between elementary and secondary education. If the college does not adjust itself to the high school the chasm between these two units will grow wider and deeper because the high school is determined to be captain of its own soul.

That there is a nice problem here to be solved nobody can doubt. It was not solved at Cleveland; it will not be solved until the high school can advise its pupils more intelligently and dependably regarding their educational and vocational careers than it has been able to do heretofore or than it is doing at present.

Vocational Guidance Should Be Offered

Time and again at the Cleveland meeting, as at previous meetings, the discussion of current problems led up to the conclusion that we shall be harassed in our educational work and shall be unable to meet pressures of various sorts until we can develop a system of guidance by means of which we can advise pupils concerning their educational and vocational careers. Shall pupils in the elementary school be encouraged to push on into the secondary school and in due course into college? For the past few years the sentiment at the meetings of the Department of Superintendence has been that all children should have the advantages of secondary and higher education and that college doors should not be closed against any child. But it has been pointed out time and again that higher institutions are failing to accomplish the most for young people of ability because they have to spend so much effort on students who cannot succeed in college work. It has been urged that it would be better for all concerned if one-third or one-half of the youth who go to college would go somewhere else. As these lines are being written, reports are coming in from institutions throughout the country to the effect that thousands of students have been sent home because they have been found entirely unfitted for the type of work that is done in college.

It is a tragedy for a boy or a girl to be admitted to college, only later to be dismissed because of incompetency. A number of speakers discussed problems pertaining to the elimination of waste in our educational work. Well, here is one terrible source of waste, both of financial resources and of mental efficiency. When a young person is dismissed from college because he is not capable of achieving even a low standard of success, he cannot but be injured in his intellectual and emotional life. About the crudest phase of our educational

work concerns this practice of inviting a lot of young people into college who cannot remain there and who feel humiliation and defeat when they are sent home. The same is true of pupils who pass on into the senior high school from the junior high school or from the elementary school, though the casualty list for high schools is much smaller in proportion than it is for colleges and universities.

The only solution for this distressing problem from whatever angle it is viewed is the development of guidance in the elementary school and the secondary school particularly, and also in the college, at least in the early years. We have gone far enough now in testing guidance technique so that we can prevent young people from making gross mistakes in deciding upon a career. It is not enough, of course, that we should perfect our methods of diagnosing individual capacity and social needs. We must so educate the patrons of the schools that they will be amenable to reason in accepting the advice of guidance specialists respecting the careers of their children. It is not an easy matter to convince a parent who is ambitious to have his child attain to the highest social position that a vocational course may be better for the child than a liberal arts course. Here again is seen the necessity for keeping laymen abreast of educational investigation and informed regarding changing educational policies based on increasing knowledge of the nature and needs of childhood and youth and rapidly changing economic, industrial and social conditions.

Expanding Downward as Well as Upward

Until ten years ago one rarely heard of the nursery school or the preschool child. But the notion that the years from one to four or five are as important as any of the years afterward has taken firm hold upon our people, laymen as well as teachers and parents. At Cleveland some of the most important papers related to the school education of the preschool child. There is abundant evidence that children once considered too young for educational training will shortly receive as much attention in organized schools as do children in the elementary or the high school. It was freely said at Cleveland that the period before the fifth year is more important than any period thereafter, because the foundations of the child's emotional, social and temperamental life are laid before he reaches his fifth birthday. It was said further that the typical home is not prepared to care adequately for children from the first to the fifth year. The claim that mothers alone can have the right attitude toward very young children and that the latter need to be understood and moth-

ered rather than taught or trained is losing its hold on our people.

Plans for the systematic training of preschool children are just beginning to be laid. We have before us practically the entire task of making the nursery school a valuable and practicable unit in the American educational system. No one said at Cleveland, so far as I know, that we shall soon incorporate the nursery school into the public school system, but eventually this must be done. The experimental nursery schools that are operating now in every section of the country are clearing the ground. It is exceedingly interesting to observe this movement in progress and to note how those who are responsible for the policies of nursery schools are proceeding in a scientific way to study the traits of the youngest children and to note the effect of organized training upon their physical, intellectual, emotional and temperamental development.

Research Programs Are Popular

From being regarded as theoretical, academic and impractical, research has already become established as an essential and requisite phase of educational activity, alike in the superintendent's office and in the laboratory. At the Cleveland meeting, research workers probably enjoyed a larger following than any other educational group. One could hear comments in the hotel lobbies to the effect that many of the papers on the superintendents' programs and also on the programs of allied societies were rather general and to some extent platitudinous. They presented views that are generally held and they exhorted the people to the performance of duties that are already generally endorsed. But no such comments were made concerning the papers presented in the sections devoted to educational psychology and research. Most of the papers on the programs of the Society of College Teachers of Education were concerned with the results of research and the same was true of the papers on educational psychology.

The research men aimed deliberately to avoid general and hortative discussion. Some people think they overdo the matter because they withdraw from the mob and arrange themselves in small groups so that there will be no temptation to indulge in an appeal to the galleries. They will not admit to membership any person whose genealogy does not entitle him to be included among the elect. Some outsiders, eager to be admitted to the holy of holies, think that the research people are too exclusive, but it is fortunate that there is a group of men and women who do not court popular applause but who wish instead to

confine their deliberations to matters of scientific importance. The only way this can be done is to have a limited number in the group and to welcome only those who have shown an interest and some skill in research work. If the meetings of the research workers were thrown open to all comers it would be impossible to resist the temptation to popularize their discussions in order that they might win the plaudits of the assembled multitude.

The superintendent must depend upon the research worker for data regarding the outcomes of his administrative policies. He must depend upon the research worker also for light upon problems arising out of the changing conditions—economic, industrial and social—in the community. The superintendent cannot by logic alone, or even by observation such as he is able to make in his busy life, determine whether the course of study should be reconstructed, whether pupils should be set free to follow programs of their own making or whether new methods of presenting the materials of education would secure better results with less waste than older methods. He cannot assume an investigative attitude; he must make decisions based upon his experience, even though these decisions be faulty. The machinery is waiting upon him for continued operation, and he cannot remain in doubt as to what should be done in an emergency.

But the superintendent can delegate to a research assistant the problem of measuring the results of one policy as compared with another, or initiating an experimental program to determine what policy ought to be followed in one situation or another. It may be predicted without hesitation that the research workers' department in the superintendent's staff will play a larger and larger rôle in advising him regarding decisions affecting the materials and methods of instruction and the provisions for meeting the needs of individual pupils and of the community in which the schools are located.

Would Raise Standards for Teachers

Great emphasis was laid on the importance of improving the personal, intellectual and professional equipment of teachers in every department of educational work. It was advised by a number of leaders in the training of teachers that the standards for admission to teachers' colleges and all teacher training institutions should be stiffened, so that only persons of superior ability should be given encouragement to prepare for the profession of teaching. It was advised further that during the training period there should be ruthless weeding out of the incompetent.

16,000 Educators From All Parts of of Superintendence Program—

THE official registration opened on Saturday morning at ten o'clock and throughout the week a record attendance was recorded, the final figures reaching close to 16,000 school administrators. The exhibits opened at noon on Saturday with most of the exhibits well in place in the auditorium annex.

On Sunday afternoon vesper service was held in the public auditorium music hall with Frank D. Boynton, president, Department of Superintendence, presiding. An exceptionally fine address was given by the Rev. Joel B. Hayden, pastor, Fairmount Presbyterian Church, Cleveland. This was followed by a musical program with Vincent H. Percy playing the auditorium organ. A varied song program was given under the direction of Griffith J. Jones, Glenville High-School Choral Club, Cleveland. An unusual feature of the meeting was the singing in the lobby of the Hotel Cleveland. This was conducted by Albert Edmond Brown, dean, Ithaca Conservatory of Music, Ithaca, N. Y.

The thesis chosen for this meeting was, "How

Can the Public Schools Better Serve Democracy?" In the first general session the question discussed was, "Can This Thesis Be Accepted Through a Better Financing of Public Education?"

Robinson G. Jones, superintendent of schools, Cleveland, presided at this general session and the president of the Cleveland Board of Education, E. M. Williams, gave the address of welcome. President Boynton then delivered his address, "Education: What Program? What Price?"

"The American school is not something fixed, static, unchanging. It is a growth reflecting the growth, the prosperity, the changing social, domestic and economic arrangements of the national life. More accurately and completely than any other institution, it mirrors the national ideals, prosperity and aspirations. The traveler in Europe on entering a town first sees the great cathedral. In America he sees the schoolhouse. It is ubiquitous and dominant. It gathers into itself an ever larger share of the life of our youth. Now it is reaching out for the adult also, offering him a share of its wealth and providing profitably for his increasing hours of leisure."

Thus did Dr. Frank D. Boynton, superintendent of schools, Ithaca, N. Y., in his presidential address picture the manner in which the school has woven itself into the very web and woof of the life of the nation.

European and American Education Contrasted

"Europe's educational system has been unable during the centuries to get wooden shoes off the feet of the common people or thatch from the roofs of their homes or to reduce its standing armies, which make it an armed camp in times of peace," Doctor Boynton continued. "When every European child stands equal to every other European child before the schoolmaster's desk, Europe will have taken the longest step toward international peace and good will in its history, a step longer than has ever been suggested by her statesmen. The difference in the level of living in Europe and America is accurately measured by the systems of education in each." Doctor Boynton then pointed out that Prussia has fewer than 9 per cent of those of secondary-school age attending school; England has fewer than 14 per cent; while in the United States more than 52 per



Frank Cody, superintendent of schools, Detroit, Mich.

Country Participate in Department

Frank Cody Is New President

cent of those of high-school age are in school.

Concerning the cost of education, Doctor Boynton said that the question is no longer whether we shall have education at public expense, but rather how much education and what kind we shall have and how we shall pay for it. "Are we trying to buy too much and too many kinds for too many people, and are we paying too much for what we are getting?" he asked. "The cost of maintaining the public school will be and should be a steadily mounting sum. Can the cost be borne?"

What Government Figures Show

Answering the question he quoted from government figures: "Our annual income as a nation is estimated to exceed ninety billion dollars. According to federal authority we are spending out of each earned dollar twenty-four and one half cents for necessities; twenty-two cents for luxuries; eleven cents for investment; eight and one half cents for crime; four and one half cents for government—local, state and national; waste, fourteen cents; miscellaneous, thirteen and one half cents; one and one half cents on education, and three fourths of a cent on religion and philanthropy. Is it not possible to double the amount spent for education and religion twice by a reduction of the waste and still be a long way from an economic breakdown from these two causes?"

With the growing complexity of the social and industrial organization, the school has been transformed from a place of mere training for children of rich or well-to-do parents into a series of great service stations, President Boynton emphasized, in tracing the growth of the school system from revolutionary days to the present time. These service stations are tax-supported, buttressed by child labor and compulsory attendance laws and dedicated to the service of all the children of all the people.

On the subject of adult education, President Boynton had this to say: "Adult education presents a new problem calling for a new educational procedure and technique, a problem that must be met and solved if the added leisure is to be the blessing hoped for. Already the socially destructive forces are finding here an enlarged field for their operation. Already the school men are fighting a public opinion set up for the moron. Birth control artists have furnished the informa-

tion that makes sex indulgence for youth as safe as kissing; discredited judges are spewing the sewage of their courts through salacious magazines until our news stands groan under the weight of the putrefaction they contain; our theaters aim at a sex appeal so crass at times as to disgust the guilty; the press, civilization's great agent, is become the chief source of the criminal's information where he finds himself daily featured upon the front page; our churches are clinging to man-made creeds hundreds of years old while their doors are closing.

"This is a picture of conditions school men are called upon to combat. The character of the defense upon which we must rely is a greatly enlarged school program which shall call to its aid in ever larger measure the cultural resources civilization has slowly built for its defense.

"What measure of value can be applied to an institution that has practically banished illiteracy; looked after the physical well-being of twenty-five million children; raised the level of



Dr. Frank D. Boynton, superintendent of schools, Ithaca, N. Y.



Arthur B. Mochlman, Department of Education,
University of Michigan.

living and thinking; increased the earning and purchasing power of the worker, thereby creating and building up a home market that consumes 90 per cent of the product of farm and factory and that has, despite the flood of immigration, kept the nation American?"

Following President Boynton's address, Joseph M. Gwinn, superintendent of schools, San Francisco, spoke on the chief concerns of the future school building program. Professor Gwinn stated that economy in future school building programs is to be secured through providing buildings, grounds and equipment adapted to the needs of the modern program of education. He said that old and antiquated school buildings must be replaced by buildings of a form and type that are suitable to an up-to-date type of education.

"It is evident that there are many forces from many directions that will influence future school building programs," said Professor Gwinn. "Determining the program is a difficult problem in the composition and resolution of forces. Nothing short of a thoroughgoing and complete building survey can give boards of education and school superintendents a satisfactory solution to the difficult problem."

Prof. George D. Strayer, Teachers College, Columbia University, New York City, next discussed how education is to be financed in view of the increasing cost. "We profess to offer a quan-

tity of opportunity," said Professor Strayer, "but this is not done unless in every school system the money that we spend buys a great variety of opportunity suited in each case to the needs and abilities of the individual boy and girl, the individual youth and the individual adult." He further stated that if the poor communities are to provide an adequate program there must be a larger measure of state support provided, and that not only must we expect a larger participation by the several states in the financing of their schools, but we must look forward to a time when the nation will recognize its obligation to equalize the opportunities provided in education throughout the land.

Prof. M. G. Clark, superintendent of schools, Sioux City, Iowa, then read the report of the committee on lay relations.

On Monday afternoon the general meeting was divided into nine administrative group meetings. J. W. Sweeney, superintendent, Elk County Schools, St. Marys, Pa., presided at the meeting of county superintendents. Paul R. Mort, associate professor of education, Teachers College, Columbia University, New York City, spoke on "Rural Education and Finance." C. M. Rarick, professor of rural education, Kansas State Teachers College, Hays, Kan., discussed the financing of rural education. Ernest Burnham, department of rural education, Western State Teachers College, Kalamazoo, Mich., took up the problem of the proper facilities for rural education, and a summary of these three talks was given by John A. H. Keith, state superintendent of public instruction, Harrisburg, Pa.

How State May Aid Schools

Superintendent of Schools L. H. Bugbee, West Hartford, Conn., presided at the group made up of superintendents of schools in cities with populations of less than 10,000. "Balancing the Budget" was the interesting topic by J. C. West, superintendent of schools, Bemidji, Minn. The second paper was given by H. H. Davis, department of education, Columbus, Ohio. He stated that one of the most significant trends in modern school finance is the increasing degree to which the state is assuming the cost of education. He suggested that the state may aid in financing the schools under one or more of three general policies: It may stimulate local effort through granting a subsidy for special work, such as agriculture, kindergarten or manual arts; it may use the subsidy as a tool of administration, through refusing grants to all schools that fail to maintain a certain standard in their buildings, equipment and teaching requirements; it may demand

a minimum standard from all schools and then provide the money needed to supplement the local revenues in providing this minimum.

W. R. Curtis, superintendent of schools, Alton, Ill., told of the procedure necessary in accounting to the board of education and to the community for funds spent by the schools. "It is of the utmost importance that every applicable business principle of efficiency in financial management be used in the organization and conduct of schools," he said. "It is necessary that we have a modern system of cost accounting, proper distribution and assignment of employees controlled by continuous check-ups, standardized buildings, merit system of appointments, standardized supplies, a requisition system that properly checks, a salary schedule for personnel service and properly balanced expenditures."

Finance Problems of Rural Towns

Financing problems in an agricultural town were discussed by H. M. Roland, superintendent of schools, Washington, N. C. He said that it was getting to be increasingly difficult to raise funds for school expenditures, and that the only way a superintendent can answer his critics is by more efficient work and by proper publicity. He said that the superintendent must obtain and hold the confidence of the community in his personal character, his professional ability and in his financial integrity, but that once he has lost this confidence his usefulness and activity are at an end. The pay-as-you-go plan in public-school building programs was discussed by C. F. Hedges, superintendent of schools, Neenah, Wis.

Wilbur H. Lynch, superintendent of schools, Amsterdam, N. Y., presided at the session conducted for school systems in cities of between 10,000 and 50,000 population. The first discussion was the cause of increase in school costs. This was presented by Louis P. Benezet, superintendent of schools, Manchester, N. H. Roy R. Roudebush, assistant state superintendent of public instruction, Indianapolis, Ind., talked on building costs. "The scientific survey as a means of assisting school administrators in determining school needs is now being generally used," Mr. Roudebush said. "This scientific attitude is rapidly replacing the older 'hit and miss' methods of determining school building needs. Costs can be cut in many instances, particularly where careful preliminary studies have been made."

M. G. Neale, dean, school of education, University of Missouri, Columbia, read a paper entitled, "To What Extent Should School Funds Be Used for Activities Not Strictly Classed as School Work?" The concluding paper of this session



William John Cooper, United States Commissioner of Education, Washington, D. C.

was given by William W. Fairchild, superintendent of schools, Rutland, Vermont, in which he discussed how far the state is justified in supervising schools that are provided with tax money for their expense. It was Mr. Fairchild's contention that the state has the right and the duty to supervise the schools to the extent of determining whether the money is used for the purpose for which it was intended and to determine whether the minimum requirements are met.

The group meeting for superintendents in cities from 50,000 to 100,000 population was presided over by L. W. Mayberry, superintendent of schools, Wichita, Kan. The first speaker was Frank G. Pickell, superintendent of schools, Montclair, N. J. Mr. Pickell talked on what type of education should be publicly financed. It was his belief that the school program must be broadened if our children are to have a chance, and that vocational demands as well as educational demands for the handicapped are great and insistent.

Homer P. Shepherd, superintendent of schools, Knoxville, Tenn., then spoke on the economies effected through efficient business management, and Paul R. Mort, associate professor of education, Teachers College, Columbia, read a paper entitled, "How a City of 100,000 People Profits From an Adequate Statewide Financing System." The last subject in this meeting was presented



*Dr. John Dewey, professor of philosophy,
Columbia University.*

by M. C. Lefler, superintendent of schools, Lincoln, Nebraska. His topic was, "Practical Economies That Are Put Into Effect in Cities of 100,000."

The fifth group for cities of from 100,000 to 200,000 was presided over by George N. Child, superintendent of schools, Salt Lake City, Utah. The first speaker was A. L. Threlkeld, superintendent of schools, Denver, Colo., who talked about the attitude of the public mind toward taxation. "We must through education point out the need for tax-supported services," he declared. "We must present the historical explanation of the complex toward the idea of taxation. We must produce an attitude of mind consistent to concrete education to the extent that such education brings about a wise expenditure of taxes."

The second paper was given by C. B. Glenn, superintendent of schools, Birmingham, Ala., and his subject was, "The Relation Between Financial Support of Education and Results." Superintendent Glenn stated that recent study disclosed that the average man with only an elementary-school education earns in a lifetime \$64,000, whereas the one who has completed high school earns \$88,000. This would indicate that on an average each of the four years spent by a boy in high school is worth \$6,000. R. L. Jones, superintendent of schools, Memphis, Tenn., spoke on the cost of public schools—past, present and fu-

ture. P. C. Packer, professor of education, Iowa State University, Iowa City, read the last paper on financial economies in school administration.

The group meeting for superintendents of cities of more than 200,000, was conducted by Frank Cody, superintendent of schools, Detroit, Mich. "State Aid for Education" was discussed by J. A. H. Keith, state superintendent of public instruction, Harrisburg, Pa., and this was followed by a paper entitled, "National Aid for Education," presented by Frank W. Ballou, superintendent of schools, Washington, D. C.

Lent D. Upson, director, Bureau of Governmental Research, Detroit, discussed the pay-as-you-go plan for capital costs. He stated that while this plan may mean a small immediate increase in taxes, the ultimate saving is enormous, and that twice as many improvements can be secured in a given period of time by this method. He further said that the chief obstacles to the pay-as-you-go plan are the unwillingness of politicians to ask taxpayers to pay for something today that can be put off until to-morrow, and the inability of to-day's taxpayers to realize that to-morrow's bill will be twice as much.

Superintendent Jones of Cleveland talked about a continuous publicity program. He said that a clean, adequate school house in an attractive setting serves to advertise a school system better



*John K. Norton, director of research division, N. E. A.,
Washington, D. C.*

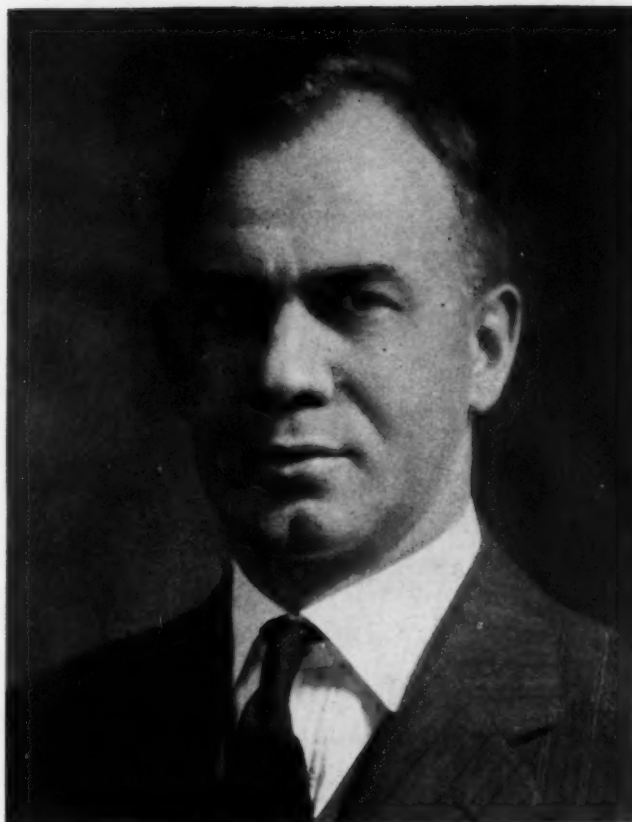
than eight columns of type in the newspaper. He further said that good publicity follows in the wake of good administration and that good administration is always for the benefit of the children and not for the benefit of the administrators. He warned his listeners against "stunt" publicity, saying that while it may carry a bond issue, in the long run a school system can progress only by virtue of a reformed, intelligent and even critical public opinion.

One of the group meetings was devoted to music progress in public schools with Will Earhart, director of music, Pittsburgh Public Schools, Pittsburgh, presiding. The values of music education in the present age were discussed by Walter Van Dyke Bingham, director, Personnel Research Federation, New York City. Superintendent of Schools William J. Bogan, Chicago, then discussed the place of music in the high-school curriculum. "Music to perform its function properly should begin in the kindergarten, continue through the grades, the junior high schools, the senior high schools and finally enter into the lives of adults," said Superintendent Bogan. Chicago has adopted a slogan for its music department that expresses this idea.

Will Grant Chambers, dean, school of education, Pennsylvania State College, State College, Pa., then talked on what company music should



William F. Russell, dean, Teachers College, Columbia University.



E. C. Hartwell, superintendent of schools, Buffalo, N. Y.

keep, and the last paper was presented by Peter W. Dykema, professor of music education, Teachers College, Columbia. His subject was a report of present practice as disclosed by surveys.

The group meeting for assistant and district superintendents of schools was presided over by F. M. Underwood, district superintendent of schools, St. Louis. The meeting took the form of a symposium on the technique of a city assistant or a district superintendent in his work. The following school men participated: Henry Roberts, Jr., district superintendent of schools, Philadelphia, and Edwin L. Miller, assistant superintendent of schools, Detroit, Mich.

The second general session was held on Monday evening in the public auditorium arena with a physical and health education program. Drills, dances, sports and ensembles were presented.

The third general session opened Tuesday morning. Following the organ recital and the group singing, the meeting was called to order by Superintendent of Schools Herbert S. Weet, Rochester, N. Y. He spoke briefly on the work of the commission on the articulation of educational units, and introduced as the first speaker, John Dewey, Columbia University. Doctor Dewey spoke on "Waste in American Education Through Lack of Coordination." Doctor Dewey stated that one example of educational waste is the failure to adapt the teaching of early school



Charles S. Meek, superintendent of schools, Toledo, Ohio.

years to the normal activities and experiences of children at that age.

The second speaker was Edward C. Elliott, president, Purdue University, Lafayette, Ind. President Elliott viewed articulation from the college and professional-school standpoint, and pointed out that the inevitable conclusion of the present trend is that, in the near future, the higher training afforded by our colleges, universities and technical schools will come to be regarded as the expected preparation of all of those persons properly fitted for the responsibilities of complete American citizenship. The last speaker was Cameron Beck, personnel director, New York Stock Exchange, whose topic was, "The Necessity of Coordinating Educational Activities With Public Affairs."

Nine discussion groups were held on Tuesday afternoon. Julia Letheld Hahn, director, kindergarten and primary grades, San Francisco, conducted a joint meeting with the National Council of Childhood Education as the first group. George Melcher, superintendent of schools, Kansas City, Mo., presided at the group that discussed new types of organization of school units.

The first speaker on the program was William John Cooper, United States Commissioner of Education, Washington, D. C., who briefly outlined the advantages and disadvantages of the 6-4-4 plan of organization. This was discussed

by John Sexson, superintendent of schools, Pasadena, Calif., and Samuel J. Slawson, superintendent of schools, Johnstown, Pa. M. H. Moore, superintendent of schools, Fort Worth, Texas, discussed the junior high schools of Texas, and James M. Wood, president, Stephens College, Columbia, Mo., presented the possibilities of the four-year junior college.

Charles H. Judd, professor of education, University of Chicago, presided at the group meeting and discussed the best means of economizing time in the reorganization of educational units. Four speakers appeared on this program which took the form of a symposium. They were Fred J. Kelly, president, University of Idaho, Samuel P. Capen, chancellor, University of Buffalo, C. R. Mann, director, American Council on Education, Washington, D. C., and David Allan Robertson, assistant director, American Council on Education, Washington, D. C.

An interesting group meeting was conducted by J. B. Edmonson, dean, school of education, University of Michigan, on accrediting agencies and college entrance requirements. Jesse H. Newlon, Teachers College, Columbia, discussed "The Articulation of Secondary Education With Higher Education." "The educational program of every unit of the school system should be determined primarily by the needs of pupils at its level," said Doctor Newlon. "The rapid increase in the enrollment of American secondary schools in the last forty years has brought into these schools millions of pupils not destined to college entrance. The standards for high schools which have been set up by standardizing agencies have dealt primarily with the college preparatory function. The establishment of these standards was beneficial at one period in the development of the high school, but present conditions demand a greater freedom for the secondary school to work out its own problems."

College Entrance Requirements Discussed

Jesse B. Davis, professor of secondary education, Boston University, talked on "The Problem of College Entrance Requirements in New England," and Lewis Wilbur Smith, superintendent of schools, Berkeley, Calif., spoke on "An Evaluation of the Worth of Accrediting Agencies." The last speaker in this group was George M. Wiley, assistant commissioner of education, New York State Department of Education, Albany, N. Y., who took as his topic, "The Articulation of High Schools and Colleges."

"The Six-Year High School for the Larger City and Smaller Community," was the theme debated in the group that was presided over by R. E. Tid-

well, state superintendent of education for Alabama, Montgomery. Prof. Calvin O. Davis, University of Michigan, Ann Arbor, presented the first paper on "The Six-Year High School in the American Public-School System." He stated that the replies to a recent questionnaire indicated that theoretical considerations favor the segregated three-year schools wherever possible, but that practical considerations make the adoption of the consolidated six-year schools desirable, if not indeed necessary in many places.

"The Six-Year High School in the Larger Communities" was discussed by C. R. Foster, president, Pennsylvania State Teachers College, Indiana, Pa. He felt that there were many advantages to the six-year high school over other plans of organization and outlined them. "The Six-Year High School in the Smaller Communities" was presented by G. H. Sanberg, superintendent of schools, Rochester, Minn., and the "Six-Year High School in the Rural Community" was the subject of a talk by A. G. Yawberg, superintendent of schools, Cuyahoga County, Ohio.

Meeting the Needs of Modern Life

Superintendent of Schools Paul C. Stetson, Dayton, Ohio, presided over the sixth group. The first speaker was Robert L. Cooley, director, Milwaukee Extension School, Milwaukee, Wis., who spoke on "Articulating the School With Life and Industry." Howell Cheney, chairman, junior educational and employment committee, National Association of Manufacturers, read a paper on "Educational Processes of the Adjustment of Youth to Life." He pleaded for a fuller use of all the existing agencies to assist the schools in a more exact definition of the requirements and necessities of modern life.

The third paper discussed the relation of the school to the home, and was given by Martha Sprague Mason of the National Congress of Parents and Teachers. Mrs. Mason said that the home and school are working on the same problem—the problem of opening doors of opportunity to boys and girls in order that through them youth may discover the best and safest roads to health, happiness and intelligent service. The last paper was given by W. W. Charters, director, bureau of educational research, Ohio State University, and dealt with the methods of articulating the school with life.

Carroll R. Reed, superintendent of schools, Bridgeport, Conn., conducted a group meeting that dealt with the problems in the field of adult education. "The Administration and Organization in Smaller Communities" was discussed by W. C. Smith, state director of adult education,

Albany, New York, and "The Administration and Organization in Larger Communities," by William J. Bogan, superintendent of schools, Chicago. "The Curriculum and Method in Larger Cities" was discussed by Alonzo G. Grace, director of adult education, Cleveland, Ohio. He gave many reasons why there had been an increase in the money expended for adult education, bringing them within ten classifications. Paul J. Kruse, professor of education, Cornell University, spoke on "The Curriculum and Methods in Smaller Communities," and the final discussion in this section was given by Randall J. Condon, superintendent of schools, Cincinnati, on the topic, "Adult Education, an Essential in a Program of Training for Citizenship."

The eighth group held on Tuesday afternoon was under the leadership of John H. Bosshart, superintendent of schools, South Orange and Maplewood, N. J. R. D. Allen, assistant superintendent of schools, Providence, R. I., talked on "The Effect of Guidance Upon Articulation From Unit to Unit and Within Units," while W. E. Givens, superintendent of schools at Oakland, Calif., told of "The Effect of Guidance Upon the Articulation of the Organization."

C. D. Cooper, director of training, State Normal School, Brockport, N. Y., read a paper on "The Effect of Guidance Upon Teacher Training



J. E. Butterworth, professor of rural education, Cornell University.

for Better Articulation," and the last paper in this group was read by Elizabeth E. Packer, acting principal, New Trier Township High School, Winnetka, Ill. Miss Packer stated that the school's experience had revealed significant results as bearing upon morale and stated that there was a growing attitude of cooperation on the part of pupils, teachers and parents; there was a growing sense of responsibility on the part of pupils, and a growing faith on the part of pupils and patrons in the validity of the school's advisory program and the consequent growing enthusiasm for the school and all that it does.

The last group discussed "The Articulation of Teacher Training Agencies With the Other Units of American Education." John W. Withers, dean, school of education, New York University, presided and talked about the report of the committee on the articulation of the teacher training agencies. He then introduced Ned H. Dearborn, state department of education, Albany, N. Y., who read a paper on "The State Department of Education in Relation to Articulation of Teacher Training Agencies Within the State." C. A. Phillips, University of Missouri, spoke on "The University School of Education in Relation to Other Teacher Training Agencies Within the State."

R. H. Jordan, Cornell University, read a paper



Dr. Leonard V. Koos, University of Minnesota, Minneapolis.

on "The Arts Colleges as Teacher Training Agencies." There is a growing tendency, he said, to expect five years of preparation beyond the high school for adequately prepared teachers. He declared that as soon as the rest of the states follow the lead of California in making this a definite requirement we shall have a new situation that will enable the arts college to continue its four-year subject matter program, involving no doubt certain courses introductory to teaching.

Training Institutions and Schools

Thomas W. Gosling, superintendent of schools, Akron, Ohio, talked on "The Articulation of State Agencies for Teacher Training With the Field Staffs of Their Service Areas," from the standpoint of the school superintendent. He emphasized that past experience seemed to justify the statement that the training institutions have not known enough about the schools they are to serve and that the schools in turn have not availed themselves adequately of the many types of service the training institutions are qualified to render. Charles R. Foster, president, State Teachers College, Indiana, Pa., discussed the report of the Year Book from the standpoint of the president and faculty of the teacher training agencies.

The fourth general session was held on Tuesday evening in the public auditorium arena. It was a joint meeting with the American Educational Research Association, with Professor Arthur B. Moehlman of the University of Michigan, Ann Arbor, presiding.

"Functional Administration and Research," was the topic chosen by M. R. Keyworth, superintendent of schools, Hamtramck, Mich. Mr. Keyworth stated that research is the means that provides a continuous self-survey, and that school organization within itself can check its own progress, can discover its mistakes, can direct its changes and adjustments and can have the evidence to justify what it is doing.

W. W. Theisen, assistant superintendent of schools, Milwaukee, Wis., then discussed "The Function and Value of Public-School Research Departments." He was followed by J. Cayce Morrison, state department of education, Albany, N. Y., who outlined the research function of state departments.

The last speaker at this session was M. R. Trabue, University of North Carolina, who spoke on "University Research and Its Value to Public-School Administration." "Educational research began with the statistical study by administrative officers and surveyors of great masses of pupils," said Professor Trabue, "but to-day it is

the teachers in the classrooms who are raising questions, and these questions concern the specific treatment that should be given to individual pupils."

The fifth general session opened on Wednesday morning in the auditorium arena with a paper presented by Ernest C. Hartwell, superintendent of schools, Buffalo, N. Y., entitled, "What a Superintendent Has a Right to Expect of an Institution Training Teachers for the Elementary Schools." Charles S. Meek, superintendent of schools, Toledo, Ohio, then spoke on what may be expected for the secondary schools, and Julian E. Butterworth, Cornell University, on what the rural schools may expect.

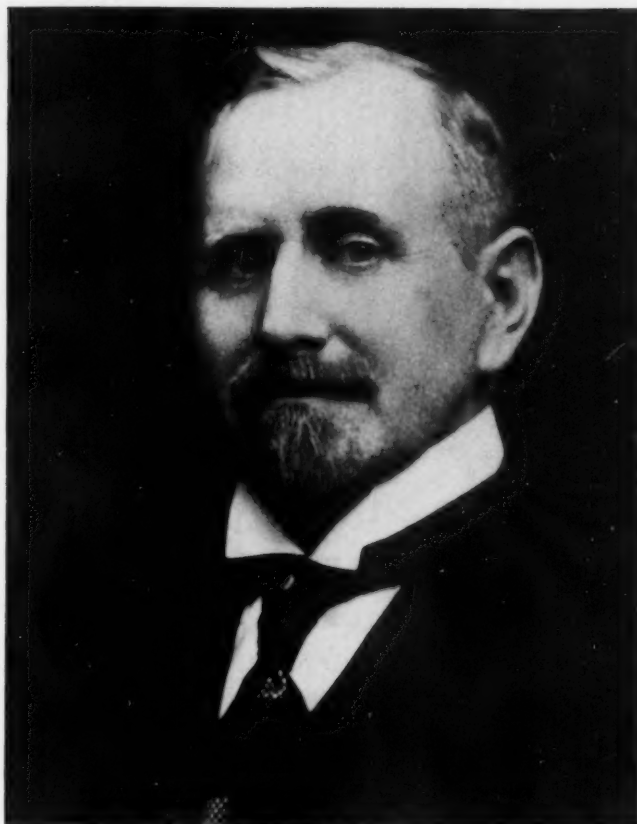
Frank Pierrepont Graves, state commissioner of education, Albany, N. Y., closed the session with a discussion on "What a Teacher Has a Right to Expect in Help, Guidance and Professional Stimulus From the School Engaging Her Services."

The administrative group held on Wednesday afternoon, opened with the first group for county superintendents with J. W. Sweeney, superintendent, Elk County Schools, St. Marys, Pa., presiding. The theme was "Better Training of Teachers" and the first paper was presented by N. Searle Light, state department of education, Hartford, Conn., who spoke on the improvement of teachers.

Vitalizing School Work

Marie Sorum, superintendent, Emmet County Schools, Estherville, Iowa, spoke on "Vitalizing Teaching Through Motive." She said that the object of the boys' and girls' institutes in her part of the country was to vitalize the school work through its teachers and students; to connect the school life more closely to the farm home and business life; to motivate children to a greater achievement through demonstration and exhibits and to make helpful use for the benefit of boys and girls of all outside agencies now in the service of youth.

Kate V. Wofford, superintendent, Laurens County Schools, Laurens, S. C., told of training teachers in service. "Not only should the superintendent assist in the improvement of the quality of teaching service," she said, "but he should also see that the teacher, herself, is given a chance for continuous development and growth. Many ways of procedure for such growth have already been established such as helpful supervision, institutes, extension courses, study centers, reading circles, teachers' meetings and teacher participation in the formation of school policies." A. E. Winship, editor, *Journal of Education*, summar-



George Melcher, superintendent of schools,
Kansas City, Mo.

ized the theme, and was the last speaker in this meeting.

A similar group discussion for superintendents in cities of less than 10,000 was held with L. H. Bugbee, superintendent of schools, West Hartford, Conn., presiding. E. W. Ireland, superintendent of schools, Stratford, Conn., spoke on "Improving Instruction Through Teachers Visitation and Conference." He stated that fully half of the superintendent's time should be spent in improving instruction through teachers visitation and conference, and that to accomplish this purpose the superintendent through the setting up of supervisory objectives, should limit his activities to the solution of one problem at a time.

L. P. Hollis, superintendent of schools, Greenville, S. C., spoke on "Basal Training and Improvements in Service," and J. P. Vaughan, superintendent of schools, Chisholm, Minn., discussed "The Teacher and the School." C. R. Coblenz, superintendent, Preble County Schools, Eaton, Ohio, spoke on "Progress in Better Training of Rural Teachers."

E. C. MacInnis, superintendent of schools, Jefferson, Wis., discussed "Making and Remaking Personality." "Little effort has been made to study the teacher from the psychological standpoint to enable her to fit her own traits and characteristics to her work of teaching," he declared. "At the present time any person who aspires to

be a teacher may enter a training institution providing certain academic standards have been met. She may be lacking in initiative, emotionally unstable, bad tempered, cynical and sarcastic, but let her possess sufficient mentality to meet the scholastic requirements for graduation and she may receive a diploma entitling her to teach." The last speaker was I. H. Hart, director of extension, State Teachers College, Cedar Falls, Iowa. His subject was, "The Improvement of Teachers in Service."

Wilbur H. Lynch, superintendent of schools, Amsterdam, N. Y., presided at the meeting for superintendents of cities of from 10,000 to 50,000 population. J. O. Creager, dean, college of education, University of Arkansas, spoke on the subject, "Are the Universities Making Adequate Provision for Liberal Citizenship Education in Their Programs for Preparation of Secondary Teachers." The second speaker was Roy P. Wisehart, state superintendent of public instruction for Indiana, who spoke on "Salaries in Teacher Training Institutions."

John B. Heffelfinger, superintendent of schools, Newton, Kan., discussed "The Success and Failure of the Young Teacher." He said that the failure of the young teacher, aside from failure due to native disability, must be assessed both against the school wherein she has had her training and against the school system in which she does her early teaching.

Admission to Teachers' Colleges

The next speaker in this group was Sheldon E. Davis, president, State Normal College, Dillon, Mont., who spoke on "Selective Teacher Training." Mr. Davis stated that the graduation from an accredited high school is not selective enough for admission to a teachers' college, and that school standards alone need to be supplemented by personal work, most of it not less effective because it seems informal.

"Better Training for Entrance" was the first subject discussed in the group composed of administrators from cities of 50,000 to 100,000 population. David E. Weglein, superintendent of schools, Baltimore, Md., was the first speaker and was followed by A. H. Hughey, superintendent of schools, El Paso, Texas, who talked on the topic, "Training After Entrance." Clyde B. Moore, Cornell University, spoke of the rewards of training and stated that the school is not mere material equipment but rather the interplay of chosen personalities. "As the teacher is so is the school," he said. The last paper was presented by Harry DeW. DeGroat, principal, State Normal School, Cortland, N. Y., on the topic, "Will Train-

ing and Rewards Develop a Profession?"

George N. Child, superintendent of schools, Salt Lake City, Utah, presided at the group meeting made up of superintendents of cities from 100,000 to 200,000 population. G. W. Frasier, president, State Teachers College, Greeley, Colo., spoke on the "Requisite Qualifications of the Beginning Teacher and How to Secure Them." P. P. Claxton, superintendent of schools, Tulsa, Oklahoma., spoke on "The Active Teacher a Constant Student."

Walter M. May, department of education, Concord, N. H., spoke on "The Place, Kind and Amount of Supervision Requisite for Improved Teaching Service," and E. S. Evenden, Teachers College, Columbia University, closed the session with a discussion on "The Relation Between Salary Schedules and Teacher Service."

How Shall We Select Teachers?

In the group for cities of more than 200,000 population, R. L. Jones, superintendent of schools, Memphis, discussed the theme, "What Counts in the Selection of Teachers?" David E. Weglein, superintendent of schools, Baltimore, read a paper entitled, "How Long Should Be the Basal Training for a Teacher?"

"At no time has there been so great a need for training teachers in service as now," said superintendent Carleton Washburne, superintendent, Winnetka Public Schools, Winnetka, Ill., who spoke on "What Training Should Be Given While in Service?" "To-day we need to train teachers to adapt their work to the wide differences that exist among individual children; to do active and worth while research in connection with their classroom problems; to look on the misbehaving child not as a culprit but as a patient and to release each child's creative powers and train him to use them."

Fred M. Hunter, president, University of Denver, spoke on the subject, "How to Stimulate Continuation of Training While in Service."

A group meeting on physical and health education was also held with Frederick Rand Rogers, department of education, Albany, N. Y., presiding. Dr. Frederick W. Maroney, director of health education, Atlantic City, N. J., told of the medical program as it should be outlined. He advocated a medical examination at least once a year for every pupil, with a supplementary examination and adequate follow-up procedure for all pupils in need of remedial care. He also advocated dental and eye examinations once a year, nutrition classes and the enforcement of vaccination.

The second speaker of this session was Jesse

Finding the "Right" Contractor

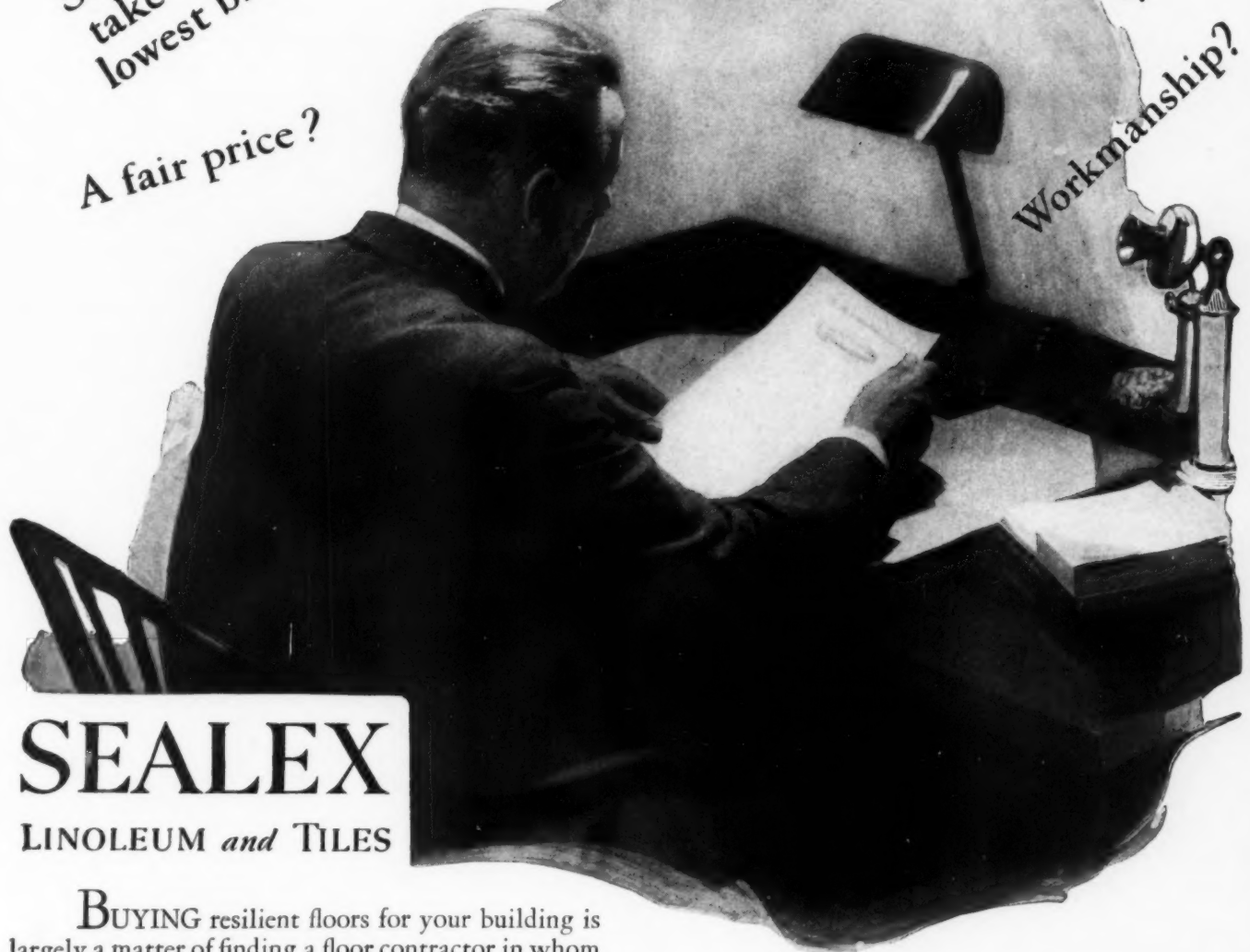
Should I
take the
lowest bid?

Is this man
trustworthy?

Known Materials?

Workmanship?

A fair price?



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One resilient flooring contractor in your vicinity, however, is not to be classed with others. He has been selected because of his long experience as well as his high standing in the community. He maintains a staff of skilled workmen—employs the most modern methods. He is the authorized Bonded Floors distributor, member of a nation-wide organization of flooring experts, his work backed by our bond.

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A. L. Threlkeld, superintendent of schools, Denver, Colo. Feiring Williams, Columbia University, who stated that the school as an educational institution is responsible for physical education as well as mental education, and that it was also responsible for providing adequate space, equipment and time facilities.

The last speaker was A. J. Stoddard, superintendent of schools, Schenectady, N. Y. He said there was probably no other phase of public-school work to-day in which there is as wide diversity in underlying philosophy, administrative policy and teaching procedure as in the field of health and physical education.

A group meeting in which training for administration was discussed was held. Zenos E. Scott, superintendent of schools, Springfield, Mass., presided. Fred Engelhardt, University of Minnesota, Minneapolis, stated that it is a unique situation in school administration that of all the employees, the superintendent of schools is selected by a lay board of education. It is difficult, he said, to expect that lay citizens will on the whole select professionally competent executives from among candidates unless minimum qualifications are established.

E. E. Lewis, professor of school administration, Ohio State University, spoke on "The Current Practices in Selecting School Administrative Officers," and Augustus O. Thomas, commissioner of education, Augusta, Maine, discussed the ques-

tion, "What Qualifications Should Be Legally Standardized?"

Thomas W. Gosling, superintendent of schools, Akron, Ohio, stated that no man is competent to be a superintendent of schools unless he owes his first allegiance to the children of the city, that he must accept the theory and act upon it that the schools are not established and maintained for the sake of the parents, nor for the sake of the teachers, nor for the sake of the politicians, nor for the sake of any private interest whatsoever, but that they are solely for the children and for the society of which these children form a part.

The sixth general session was held Thursday morning with the following program: "The Scientific Investigation of Problems of Character Education," William F. Russell, dean, Teachers College, Columbia University; "Handicaps of Character Education in the United States," William C. Bagley, professor of education, Teachers College, Columbia University; "Character Education From the Point of View of the Philosophy of Education," John J. Tigert, president, University of Florida, Gainesville.

At the last session held Thursday afternoon, Uel W. Lamkin, president, National Education Association, was introduced as was Prof. William John Cooper, the newly appointed United States Commissioner of Education and Frank Cody, superintendent of schools, Detroit, Mich., the newly elected president of the Department of Superintendence.

An excellent address was given by the Hon. Myers Y. Cooper, Governor of Ohio, and this was followed by an address delivered by Paul V. McNutt, dean, school of law, Indiana University, and the national commander of the American Legion.

Space does not permit of reports being published at this time of the many interesting meetings that were held in conjunction with the meeting of the National Education Association but these will be covered in the April issue of *The NATION'S SCHOOLS*.

A Successful Experiment in Secondary Education

That the Salina, Kansas, experiment in secondary education is proving successful is shown by the fact that other large high schools in the state are adopting the same system. The Salina junior and senior high schools are organized as one unit under the direction of a principal and three assistants.

An effective division of the student body was made among the three school buildings available.

NOW....your budget can afford furniture that is truly homelike!

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But until the advent of Simmons furniture of metal, to give such surroundings and yet keep inside the usual budget, was almost impossible.

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And most remarkable of all you will find that Simmons bedroom furniture of all-steel costs but little more than the usual kind made of wood.

On this page are shown three typical moderately priced pieces... if you will write to our Contract Division we will be very glad to send you a catalog illustrating other styles and quote prices. The Simmons Company, Contract Division, 666 Lake Shore Drive, Chicago, Ill.



SIMMONS

BEDS... SPRINGS... MATTRESSES... *Built for Sleep*

Cleveland Exhibits Bring Variety of Ideas to School Men

Evolution of school aims and ideals is translated into concrete expression by 253 exhibitors displaying the latest developments in supplies and equipment at Department of Superintendence meeting

BY PHILIP LOVEJOY, ASSISTANT SUPERINTENDENT, HAMTRAMCK PUBLIC SCHOOLS, HAMTRAMCK, MICH.

PAYING \$50,000 for 100,000 square feet of floor space in the annex of the magnificent Cleveland Auditorium was the means taken by some 253 manufacturers and jobbers to inform 4,000 members of the Department of Superintendence of the National Education Association and their 10,000 friends of the new ideas in school supplies and equipment.

The evolution of school aims and ideals was translated into concrete expression by these 253 exhibitors. The appropriateness of this idea was carefully sensed and carried out by a seating company in its display featuring the old-time two-seat wooden bench that used to repose so calmly on the slanting floor of our old New England schoolhouse. Contrasted with this was the most up-to-the-minute individual single pedestal desk.

Keeping Pace With Economic Progress

Vast displays of radio and visual apparatus convinced the onlooker that the schools had not failed to keep pace with the economic and industrial progress for which America is the pacemaker. School supply houses cater to demands and this exposition showed that schools must be right up to the minute in their devices. Many a visitor was charmed by the music that came from a studio at his left while at a booth at his right he lackadaisically viewed monkeys gathering coconuts in oriental climes.

Surely the day of individual instruction with all its self-appraisal and self-direction material is upon us and 16,000 persons have seen the latest developments in the field of educational devices.

The NATION'S SCHOOLS is not unmindful of the fact that many school executives found it impossible to attend the Cleveland meeting. In order that the exhibits might be of the greatest possible service to those who remained on the firing line, arrangements were made to have all the new developments winnowed out, carefully analyzed and presented in tabloid form in this issue. A complete list of the exhibitors was published in the February issue. Manifestly each of the 253 ex-

hibitors cannot be mentioned in the brief space allotted to this article but certain significant items showing trends have been selected impartially.

Down the aisle on the right was displayed a collapsible globe manufactured by a New York City concern. It is a globe made of a waterproof material, capable of receiving a bladder and of being inflated to a fourteen-inch diameter. At the present time the globe is black and on it the continents are outlined in gold. The globe will receive colored chalk smoothly but, better still, poster paints may be used and pleasing color combinations made. It is extremely light and may be passed easily from child to child. It may be stored in a small space without fear of breakage. Similar globes, made by this company, are used in the teaching of spherical mathematics.

Next to the corner there was on display a new device that permits two seats to appear where there was but one desk before. A classroom accommodating thirty pupils may have the usual number of desks and seats but when it is desired to adapt the room to a lecture or assembly, one has but to take his desk and place it in the prearranged slots on the desk standards on either side of the aisle and with a simple flip of the hand convert it into a seat across the aisle. Thus sixty persons can be easily seated in the same space that was holding but thirty a moment before. Various combinations are offered, such as staggered locations for study and examination rooms. Facilitation of custodial service is an additional point in favor of the device as it makes possible wide aisles and rows for sweeping. The device also points toward a rearrangement and simplification of school seating equipment.

Helps for the Young Artist

In another booth there appeared several new items, the first of which is an individual paste jar, which is filled from the gallon supply at the teacher's desk. Holding but a small amount, it tends to solve one of the irritating problems of the art teacher, in that neatness and cleanliness are the

"OUT OF DOORS"

days are coming when spring air will have unimpeded right of way to every corner of the school.

China, glass, and silverware washed with



winter or summer, have always that sweet, sanitary cleanliness so suggestive of sunshine and summer days.

This protection of wholesome, sanitary cleanliness for the school cafeteria and dining room is the secret of the increasing use of this pure and dependable cleaner by schools the country over.



Ask your supply man for
"WYANDOTTE"

The J. B. Ford Co., Sole Mfrs., Wyandotte, Michigan

more easily permitted by the new jar. Then, there was the air-tight mixing cup that has been placed on top of the two-ounce jar of poster paint. This prevents the paint from drying and also gives a much needed unit in art work, in that the artist has several mixing cups at his disposal. One also finds in a refillable brush a type cleaner for the typewriter. The applying brush is a useful article. When coupled with the glass tube, which facilitates application as well as refilling, it becomes helpful to the typist.

A journey to another booth showed a number of new things in laboratory equipment. There was the device that sets forth new ideas in magnet demonstration. New and complete histories of frogs and crayfish, coupled with dissected specimens on the reverse side of the holding tube, are of interest. A Bunsen burner that is adjusted internally has proved its value, being easily controlled and practically foolproof.

That school transportation is an important problem was evidenced by the excellent displays of two motor companies. Any school district would be proud to have its name in gold on the side of either of the busses shown whether it holds twenty pupils or fifty-three, as did one large cream and green colored bus on display.

Custodians Find Desk Plug Satisfactory

Many school custodians have had trouble in keeping their school desks fastened solidly to the cement floor. They have tried drilling a hole, plugging it with wood and then bolting the desk to the wood, but somehow or other the wooden plug soon gives way because of the changing humidity, and the desk is again loose. A New York City company has a jute plug that obviates all this difficulty. Although the device is simple, the one on demonstration was holding 900 pounds. Those who have recently tried the plugs have found them successful and satisfactory.

As children many of us had to hold yarn for mother while she rolled it from the skein to the ball. A braiding company of Massachusetts has taken all the fun from this type of activity but it also has lessened the chance of entangling yarn by creating combinations of yarns in several especially attractive lengths.

Right after the World War, in White Plains, N. Y. there was developed a little device, a drill test, which was used for addition only. Since then five additional tests have been added. These tests have the happy faculty of combining a game with real work. The test consists of two round discs superimposed on each other. On the lower disc is a series of numbers while on the top disc is a window under which a second number is printed.

For instance, two and eight show up. Since the answer in addition is ten, the pupil must put his wire handle into the number ten hole. If this is done, and a little jerk to the left is made, a new problem will show up and "one" will be registered in the indicator showing that one problem has been solved correctly. There are eight choices in all in this solution. If the child places his pointer in the wrong hole the same problem remains on the board. Eight windows are around the board. Eight problems to each window taken in irregular combinations present a limitless number of problems. There are also tests in the four fundamental processes and column addition and fractions.

Scientific Apparatus on Display

Additional scientific apparatus was shown by a Chicago company. There was the apparatus that demonstrates the axiom: "You cannot see an atom but you can see where it has been." Then, there was the new magnet device holding 300 pounds. Crucibles with a fusing point 50 per cent higher than porcelain were exhibited. An interesting booklet can be obtained. Many visitors were heard to remark that this company must be furnishing equipment to Thurston, so varied were the demonstrations.

Although electric warm air hand driers are popular, one objection to them in the past has been the noise they made when in use. This obnoxious sound has now been eliminated by a company making hand drying equipment.

That various school equipment companies are ever alert to improve their products was evidenced by numerous companies. For instance, one company has solved the problem of adapting the height of the type case to the height of the various students who will use it. This adjustment may be placed on the cabinets now in use. A Kansas City concern is making a bumpless water mop. Two-handle and five-mop sizes serve to give the necessary variety to this mop which has no exposed metal to scratch or mar. No harm can be done with this device.

The merging of two companies producing soap and toilet articles has brought forth a new health program. All the necessary pins and literature are furnished by this new company and attractive methods are taken to have school children keep themselves clean.

Several new methods have been developed by a company manufacturing crêpe paper. In one device sealing wax was painted on glass with an alcohol mixture and coupled with tin foil to give a magic glass effect. Other interesting things developed by this company are stuffed crêpe paper animals, vegetable dolls and painted sealing wax



A new Desk Top of Stedman Reinforced Rubber

An ideal writing surface; does not scratch, dent or stain. Standard sizes, easily applied.

Renew the writing surfaces of old wooden school desks in a few hours by applying these handsome tops of Stedman Reinforced Rubber. Quickly cemented to wood or metal. Provided with inkwell hole and pencil groove as shown.

An ideal writing surface, smooth and warm to the touch. *Noiseless and lasting.* Sanitary; ink stains removed with a damp cloth.

Made in popular standard sizes 3/16 in. thick, in our Verde Antique, *dull finish*; a particularly handsome grain of green and white on a black field.



Quiet, comfort, and beauty characterize the floor of Stedman Reinforced Rubber Tile, famous also for its exceptional resistance to wear.

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describes these desk tops and also Stedman Reinforced Rubber Tile, the Modern Floor for schools. Copy sent gladly.

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boxes. Special booklets may be obtained regarding these new methods.

Exhibits from an educational research service were on display. Interesting classroom material appears in this tabloid student service which appears monthly. When fifty subscriptions are ordered the teacher receives a weekly research report that is replete with current material. Every three months a complete index is sent to the teacher, placing at her disposal the world's news and methods of finding it.

A substantial folding chair was displayed. This chair is capable of being folded to a one-inch space and is a comfortable solid steel chair. It is obtainable in attractive colors and is distributed by an Illinois concern.

An adjustable kindergarten frame that makes up into attractive houses and rooms has been produced. The frame is covered with burlap and many entrancing combinations may be made. The company making this frame has also produced a new swivel frame that will hold wall board or three-ply veneer. Attractive maps and graph boards can be inserted, thus giving it a variety of uses. The frames may be made into an easel with but little difficulty.

A new series of physical geography maps has been printed as well as a series of civics maps. The physiology charts to teach hygiene and health rather than pure anatomy should be of great value. Eight of these are completed and the remaining eight will appear in April. Dr. C.-E. A. Winslow is the editor.

Solving Chair Maintenance Problems

An Indiana chair company has developed a chair and bed brace that will help many a custodian solve his problems of chair maintenance. This brace is easily attached immediately under the seat of the ordinary chair. Angle head bolts with copper chain and a central tightening device which is capable of being tightened at any time are the component parts of this brace which should enable a chair to double its ordinary life.

Many public schools have seen real value in the product of a Cleveland sash manufacturing company. This is a special method of hanging wooden sash so that it may be cleaned on either side from the classroom. Not only is the special cleaning method a feature but the ordinary classroom can be converted easily into an open air room. Practically 95 per cent of the window space may be left open by this product. It further enjoys the faculty of being air-tight when closed.

Librarians would have been interested in the very fine model library on display by the American Library Association, Chicago. A Syracuse

company was showing practical library furniture. It was also distributing attractive pamphlets describing how to remake old books.

A company manufacturing sanitary equipment has brought out a new machine that vends its product in a flat manner. The machine is a sort of Robot in that it measures a nickel in four ways. Slugs will not cause the machine to work. The machine is simple in operation and has an "empty" indicator.

Educators Pleased With the Exhibits

Much in new physical apparatus was exhibited by a Chicago concern. Of interest were the trip scale for measuring density as well as the new vertical force board.

Mention may be made of a special tape for remarking music scores so that they may outwear the ordinary score. Although this product is twelve years old, many persons may not be acquainted with it. This material cuts down music maintenance and makes the booklet more attractive. A method of teaching band and orchestra music has also been developed by the company making the tape.

Glass basket ball stops were on display.

A special metal and composition basket ball stop was shown by a Chicago company making gymnasium equipment.

Clocks from three different companies were on display. Floor cleaners of all kinds were in evidence, most of which are familiar to the trade. Practically all the book companies had excellent displays. The excellence of radio and visual educational apparatus has already been mentioned. Practically all the larger distributors had exhibits that were pleasing to the eye and ear. One company had its display of up-to-the minute maps.

An interesting open air cot was shown by a Vermont chair company. This was a specially constructed frame on which was slung a canvas on a rope spring. Cleanliness seemed to be the chief aim of this device, which may be used either in kindergarten or open air rooms.

A New York company had an attractive display of drawing inks as well as of wax crayons for fabric work that will not fade.

The latest designs in sewing machines were in evidence as were also displays of modern seating equipment. Pianos of several different makes were on display as were lead pencils and writing materials. Several colleges gave publicity to their advantages. Various types of duplicating machines were shown. The exhibit was one of the best yet shown at a meeting of the National Education Association and great benefit could be obtained from a study of the exhibits.



(left) Steeltex for Floors was used in this Batavia, N.Y., School. Steeltex eliminates the use of forms, saves materials through preventing droppings, ensures proper curing, speeds up construction, and puts reliable reinforcing equally spaced throughout the slab.

(right) Reinforced concrete floors at minimum expense in another new school. Steeltex for floors was used in the Coraopolis, Pa., High School.



New economical concrete floor method already widely accepted

Steeltex combines steel reinforcing and concrete forms. It is quickly stretched in place over all types of beams. Cut from rolls to any desired length, it ensures ease and speed of application. The illustration shows it being laid in a steel frame house. It is used with any type of steel or wooden joist or beam.



The backing of Steeltex is of ample strength not only to support concrete while being poured, but also to afford safe walking surface once the fabric has been attached to the joists.

To build stronger and better concrete floors for less money was the purpose for which STEELTEX for Floors was introduced to the building field a year ago.

Today hundreds of successful installations in apartments, hotels, schools, churches, hospitals, theatres, and office buildings indicate its widespread acceptance.

Leading engineers, architects, and contractors everywhere employ STEELTEX for Floors, and a few of the many types of construction using it are illustrated here.

Let us send you complete information about this time-and-labor-saving material. The coupon brings our free book, STEELTEX for Floors.

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FOUR TYPES—SAME PRINCIPLE
SAME PROTECTION

for plaster . . for stucco . . for floors and roofs
(concrete and gypsum) for stone or brick facing.

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Send, without obligation, your book, "STEELTEX
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News of the Month

Music Supervisors to Meet in Milwaukee

The North Central Conference of the National Music Supervisors' Conference will be held in Milwaukee, April 16-19. The Milwaukee Biennial public-school music festival will also be held during this convention and all delegates will have an opportunity to hear demonstrations with large ensembles. The famous Milwaukee Lyric Male Chorus of 110 voices will appear in a complimentary concert.

The general plan of this convention will be that of a clinic. The most prominent and successful people in specific musical accomplishments will have charge of special clinics. Those attending are urged to choose the line of work in which they may be most interested. A conference chorus will be organized for clinic purposes. There will also be a combined college chorus composed of technicians from colleges, universities and conservatories.

Gorgas Institute Sponsors Health Contest in High Schools

The Gorgas Memorial Institute, 1331-3 G Street, N. W., Washington, D. C., has announced plans for a nationwide essay contest among high schools as a supreme effort to reach the younger generation with proper and useful health educational information. All pupils in junior and senior classes in any high school are eligible to enter this contest. The subject of the essay is, "The Life and Achievements of William Crawford Gorgas and Their Relation to Our Own Health." The essay must not exceed 1,500 words. The prizes range from \$500 down to \$20 in cash awards.

This is a well established institute and its program is: authentic health information given to the public by reputable physicians and dentists; promotion of the periodic health examination idea among the public; research in tropical diseases and mosquito abatement campaign.

Bill Provides for Separate Department of Education

A bill recently presented before Congress by Representative Robson of Kentucky provides for the establishment of a department of public education independent from any other department of the federal government.

According to the wording of the bill, the object of this department will be "to aid and encourage the public schools and to promote the public educational facilities of the nation, so that all the people of the several states and territories, without regard to race, creed or color, shall have greater educational opportunities and thereby abolish illiteracy; to make more general the diffusion of

knowledge and to provide for the general welfare, but without impairment of or infringement upon the laws, rights, duties, authority or responsibilities of the several states, territories and the citizens thereof, with respect not only to the public educational agencies and institutions, but likewise as to private educational institutions and agencies in the several states and territories."

Other provisions of the bill are that this department shall be located in Washington, that it shall be directed by a secretary of education and an assistant secretary of education, and that the Bureau of Education be transferred from the Department of the Interior to the Department of Education.

Seek to Fill Vacancies in Philippine Island Schools

Opportunity is offered teachers who wish to teach in the Philippine Islands by Carl M. Moore, 2227 Ward Street, Berkeley, Calif., who has been delegated to make a number of appointments to fill vacancies in the Islands' schools.

Applicants must be college or university graduates with teaching experience. The salaries paid range from \$1,500 to \$2,000 a year. Transportation will be paid to the Islands and successful applicants will receive half salary while en route. The *Western Journal of Education* explains that those receiving the appointments will be required to sign a contract for two years' service.

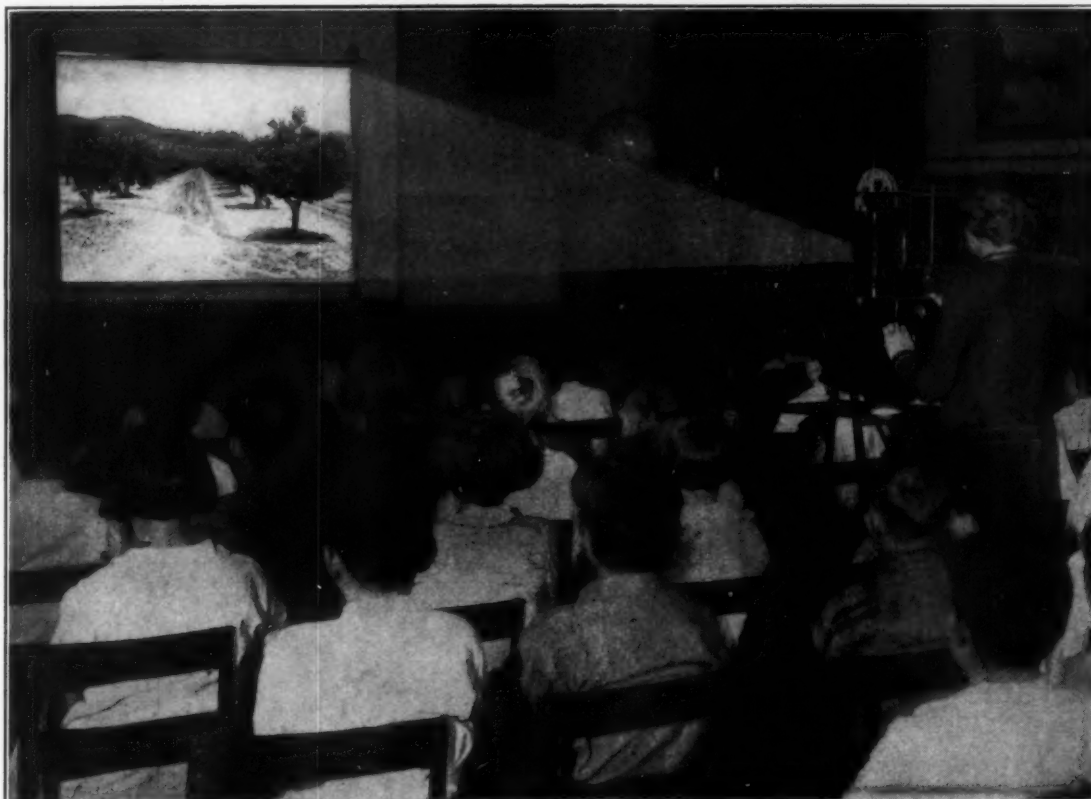
New High-School Building Is Dedicated at Pecos, Texas

The new high-school building, Pecos, Texas, was dedicated on February 17. This building is the central unit of a plant that will house full departments of home economics, commercial studies, manual training and the regular required courses. Manual training and possibly agriculture will be included in the units that are to be added as the enrollment justifies. The building is equipped throughout with modern equipment which includes recessed corridor lockers, library furniture, book-keeping desks, typewriter tables, cooking and sewing tables of the latest design, gas ranges and hot plates and adequate electrical conveniences.

The building has a gymnasium and auditorium. The auditorium seats 800 persons.

The building has offices for the superintendent and the principal, a teachers' room, a vault for records as well as the usual conveniences found in modern buildings.

The scholastic population of Pecos last year exceeded that of the previous year by more than 35 per cent and the growth during this year has been equal to or above that of last year, according to Joe R. Humphrey, superintendent of the Pecos schools. Oscar W. Thurston is principal of the high school.



The screen makes its contribution to a lesson on irrigation

Teachers Are Overwhelmingly Convinced of the Effectiveness of *Eastman Classroom Films*

The hundred teachers whose pupils had the benefit of *Eastman Classroom Films* in the great experiment of 1928 are overwhelmingly convinced of their effectiveness. So are those who are using them now. Because:—

1. These films arouse and maintain greater interest.
2. They increase the quantity and improve the quality of reading, project work, classroom discussion and writing.
3. They help pupils to correlate materials more thoroughly.
4. They increase the richness, accuracy and meaningfulness of experience.
5. They facilitate the teacher's work of organizing lesson materials, and add to the pleasure and interest of teaching.

Learn more about Eastman Classroom Films. Write now for a booklet that tells the whole story.

EASTMAN TEACHING FILMS, Inc.

SUBSIDIARY OF EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

News of the Month

University of Mississippi Plans Improvements

Contracts totaling approximately \$350,000 were awarded recently by the state building commission of Mississippi for the construction of a law building, gymnasium, athletic field house, cafeteria and pump house at the University of Mississippi, University, Miss.

With these contracts there remain others totaling approximately \$670,000 on an original appropriation of \$1,600,000 for permanent improvements at the university. These are to be let within a few months. These contracts are for a group of three structures to compose a graduate school, two classroom buildings, a demonstration high school, a \$200,000 hospital, a group of homes for professors and a power house.

Organize Pupil Fire Brigades in Portland Schools

Steps taken in the schools at Portland, Ore., to assure safety in case of fire include the organization of pupil fire brigades in each school and the conducting of oratorical contests on fire prevention during Fire Prevention Week. Rewards are offered for the best fire department in the schools and the winner of the public speaking contests this year was given a trip to the convention of the International Association of Fire Chiefs at Philadelphia. There he delivered his winning speech at one of the sessions.

New Jersey Educational Survey Staff Is Enlarged

Due to an increase in appropriations from \$25,000 to \$50,000 made by the legislature, the survey staff of the New Jersey State Educational Commission has been considerably enlarged as has also the extent of the work the staff is doing. The time of making the report of the survey has also been extended until the legislature convenes in 1930, which will also make possible a more comprehensive survey.

The survey commission is composed of six members of the legislature, the president of the state board of education, the commission of education, four appointees of the governor and three appointees of the commissioner of education. Senator Arthur N. Pierson, the author of a number of outstanding educational acts, is the chairman of the commission.

The members of the survey staff and their respective fields of work are as follows: Harlan Updegraff, formerly president, Cornell College and professor of school administration, University of Pennsylvania, director of the study; George F. Zook, president, University of Akron, and L. E. Blauch, professor of secondary education, North Carolina College for Women, Greensboro, higher education; William C. Bagley, Teachers College, normal schools; Francis B. Haas, president, State Nor-

mal, Bloomsburg, Pa., and formerly superintendent of public instruction, Pennsylvania, state-school administration; Julian E. Butterworth, professor of rural-school administration, New York State College of Agriculture, county and rural-school administration; Arthur B. Moehlman, professor of school administration and supervision, University of Michigan, city-school administration; Preston H. Smith, superintendent of schools, Bayonne, N. J., and Harl R. Douglass, professor of education, University of Oregon (visiting professor at the University of Pennsylvania), secondary education; J. J. Savitz, principal, Glassboro Normal, Clifford J. Scott, superintendent of schools, East Orange, N. J., Francis M. Garver, professor of education, University of Pennsylvania and Lois Coffey Mossman, associate professor, Teachers College, elementary education; F. G. Bonser, professor, Teachers College, special curriculum studies for pupils of lower mentality; Lewis A. Wilson, assistant commissioner, New York State Department of Education, vocational education; Edgar A. Doll, Vineland Training School, Vineland, N. J., education of the feeble minded; Owen D. Evans, professor, Girard College, Philadelphia, adult education; Harlan Updegraff and Carmon Ross, supervising principal, Doylestown, Pa., school finances.

Ethical Culture High School Seeks Additional Funds

Fieldston School, the new pre-professional and high school of the Ethical Culture School, New York City, is seeking more funds to complete the buildings of the institution. Part of the school plant was opened last October and is now in operation with 400 pupils in attendance, served by a faculty of sixty teachers.

John D. Rockefeller, Jr., has promised \$150,000 toward the fund of \$600,000 needed to complete the buildings, providing that the rest be raised by June 29, 1930. The buildings now in use were completed at a cost of \$1,000,000.

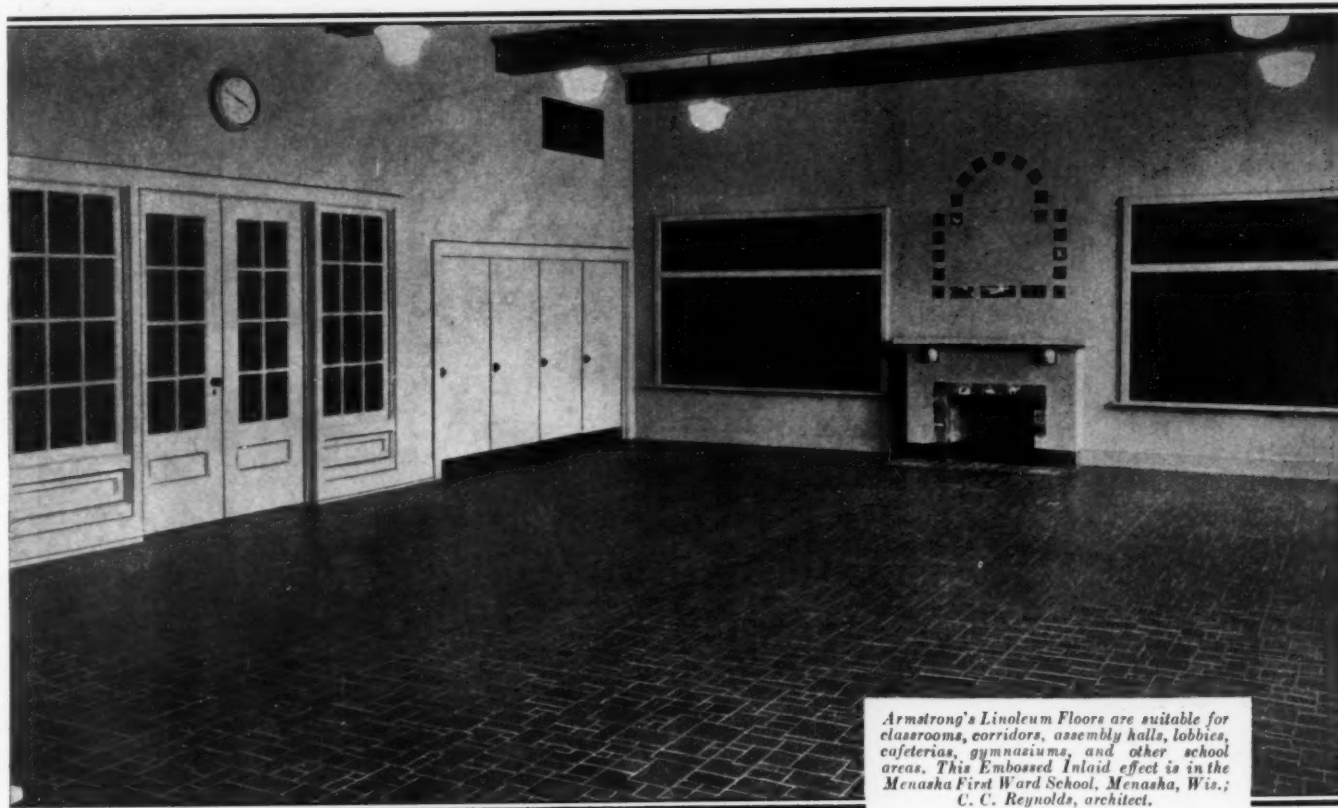
Urge Higher Standards for Instructors in Journalism

One of the features of a recent meeting of the American Association of Schools and Departments of Journalism at Ann Arbor, Mich., was the discussion of changes that would raise the standard of educational requirements for teachers of journalism, it has been announced in the *Michigan Educational Journal*.

The association adopted the recommendation that after July, 1929, all teachers appointed to full professorships in journalism shall have had five years' professional newspaper experience prior to their appointment, and that instructors in journalism shall have had at least two years of professional newspaper experience.

A resolution was also passed providing that of a minimum of twenty-four credits of graduate courses required for a master's degree in journalism, at least one-half shall consist of graduate work.

Can School Floors Teach Lessons of Color, Comfort, and Cleanliness?



Armstrong's Linoleum Floors are suitable for classrooms, corridors, assembly halls, lobbies, cafeterias, gymnasiums, and other school areas. This Embossed Inlaid effect is in the Menasha First Ward School, Menasha, Wis.; C. C. Reynolds, architect.

R. W. Sexton, Editor of the American Architect, says yes . . . and they can do it most effectively if they are Armstrong's Linoleum Floors

CHILDREN are influenced by their environment. This is as true in the school as it is in the home. Therefore, it is natural that educators are selecting for today's schools modern equipment . . . the equipment that teaches impressionable children lasting lessons in color, comfort, and cleanliness.

R. W. Sexton, Editor of the American Architect, says: "Schoolroom floors play an important part in the development of a child. They should be clean floors—to induce neatness, cleanliness. They should be attractive in design and color—to induce an appreciation of beauty. Modern linoleum floors, in my opinion, do

all this and more. They are permanent—there you have economy. They are comfortable, easy to walk upon. And when you choose Armstrong's Linoleum you have the opportunity of selecting modern floors that embody correct structural qualities . . . modern floors that are appropriate and in harmony with any architectural plan or scheme."

An advance in school construction is represented throughout the



What kind of floors will greet these children when they get to school? Resilient floors that can be graded "A" in color, cleanliness, quietness, sanitation?

country in Armstrong's Linoleum Floor installations. They teach children that floors, as well as desks, may be kept neat, clean. They provide both pupils and teachers with sure, comfortable footing. Their quiet resilience reduces noise and is an aid to greater efficiency in study. And they guarantee a sound equipment investment to school superintendents and architects.

Our School Service Department will be pleased to help you in your specific floor problems—to make recommendations, if you like. Ask for "Enduring Floors of Good Taste." Armstrong Cork Company, Floor Division, Lancaster, Penna.

Look for the
CIRCLE A
trade-mark on
the linoleum book



Armstrong's Linoleum Floors

for schools and colleges

News of the Month

Indiana Administrative Handbook Is Issued

The inspection division, Indiana State Board of Education, has mailed the recently issued Administrative Handbook to all superintendents and administrators together with the new tentative high-school course of study in art. The handbook is a departure in this field and is carefully organized and prepared in a brief, concise and simple manner. It has also been carefully indexed, thereby adding to its usefulness and utility.

It contains: an explanation of the systems of classification of high schools; a statement of the standards used in determining classifications; the new high-school program of studies; a discussion of the various types of organization—eight-four school, junior high school and six-year high school and a brief discussion of a number of problems relating to the administration of high schools; the regulation of the state board of education relating to high-school administration.

Invite Nineteen Nations to Inter-American Conference

In an effort to start an Inter-American education organization similar to the World Federation of Education, Uel W. Lamkin, president, National Education Association, has sent invitations to nineteen nations of the Western Hemisphere. Before the invitations were sent, however, assurance was given by a number of representatives of these nations that such a movement would be met with favor, according to a report in *School and Society*.

The conference has been set for June 28 to July 4 in connection with the sixty-seventh annual meeting of the National Education Association to be held in Atlanta, Ga., this year. At least one delegate is expected to attend from each of the nations invited.

Dr. Ray Lyman Wilbur Accepts Interior Portfolio

Dr. Ray Lyman Wilbur, president, Leland Stanford University, has been granted a year's leave of absence by the authorities of the university so that he can undertake the task of reorganizing the Interior Department for President Herbert Hoover. If the reorganization duties require a longer time, Doctor Wilbur's leave will be extended.

Pupils Asked to Solve Disarmament Problem

The object of an essay contest that is now being conducted by the Brooks-Bright Foundation, Boston, to which high-school pupils in the United States, Germany, France,

Great Britain and Canada are eligible, is to solve the problem of disarming the world's armies and navies, according to an announcement in the *Journal of Education*. The essays, it is stated, must show the effect upon national thought of the great armed forces maintained ostensibly for national defense, and, from this angle, suggest possible methods of complete or partial disarmament.

Chicago Board Appoints Full-Time Safety Engineer

Following the installation of the pupil police system in the Chicago schools, a full-time director of safety has been appointed by the board of education, according to a recent announcement.

In addition to carrying on a safety education program, the duties of the new director, who is a safety engineer, include the promotion of increased playground facilities, traffic reform and an extensive campaign to enlist public interest in the work. This program will not only train children in self-protection from street hazards, but will prepare them for future responsibilities in traffic and in industry.

Then, too, comes news from Honolulu, that, since the appointment of some 350 junior police officers in the schools six years ago, there has not been a single fatal accident to any child near a public school. In addition to having the pupil policemen there, lessons in safety are given daily in the primary grades. Safety talks are given at the public-school assemblies, and one of the daily papers publishes a safety lesson each week which can be used for instructional purposes.

President Little Leaves Michigan

The resignation of Dr. Clarence Cook Little from the presidency of the University of Michigan, where he has served during the last three years, has been accepted by the board of regents of the university. At the request of Doctor Little, Dr. Alexander G. Ruthven, dean of administration, was authorized by the board to conduct the affairs of the institution in conjunction with a committee from the board.

New College to Open at Newport in September

The proposed Newport College, which will offer four-year courses in the sciences and arts, will, according to present plans, be opened at Newport, R. I., next September. The proposed curriculum comprises courses in classical and scientific subjects, music, art, business, home economics and teacher training. Two-year courses in similar subjects also will be given.

Quarters for the new institution have not been definitely chosen, but several prospects are in view and it is expected that September will find the school ready to undertake its educational functions.



Latest Improvements in Unit Heating and Ventilating

backed by 38 years of specialized experience

Many important new features have been developed for PeerVent Heating and Ventilating Units during the past several months. In fact, *all* of the important features — radiator, motor, fans, and controls — have been improved. These improvements, made by the pioneer manufacturers of Heating and Ventilating Units, should have your careful consideration.

Adjustable motors are now standard equipment on PeerVent Units. Once set, these motors run at constant speed, to deliver the exact c.f.m. capacity required.

PeerVent Units can now be equipped with the PeerTherm Control as an integral part of the Unit. This device controls the fresh-air damper.

Catalog N-3 on request.

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HEATING AND VENTILATING UNITS

News of the Month

Award Contracts for New Boston High School

After a careful study of a Boston community's needs, contracts totaling \$1,250,000 have been awarded for the construction of the new Brighton High School. The building, which in itself will be an architectural accomplishment worthy of great praise, will be surrounded by beautifully terraced lawns.

The main building is to be located on raised land about twenty feet above street level, and the main entrance to the school will be reached by a terrace 250 feet long and about 100 feet wide, elevated ten feet above street level and approached by a driveway. The ground floor on the driveway level provides for an assembly hall with seating capacity for 1,000 persons. In the assembly hall will be a large stage with provisions for scenery and ample dressing room space.

The large gymnasium will be subdivided by folding partitions into two rooms, one for boys and one for girls. Here also will be provided rooms for the instructor and for the matron. An added feature is the rifle range and gun storage room where competitions in shooting will be held.

The architectural design of the building is an adaptation of English Collegiate Gothic, which was considered most desirable, considering the condition of the grounds surrounding the building. Every effort has been made to follow out modern ideas in the location of the various departments in the school and special provisions are being made for evening activities in the building.

Fires Destroy Three Michigan Schools

Two high schools, one at Ontonagon and the other at McBain, Mich., were destroyed by fire on January 5. Another fire four days later destroyed the Eckstrom School, South Ford River Township, Mich. Damage at the Ontonagon school was estimated at about \$150,000, of which \$100,000 was covered by insurance. Losses on the McBain school were also partly covered by insurance. Classes in McBain were resumed ten days after the fire when accommodations had been obtained in churches and lodge halls, according to an announcement in the *Michigan Education Journal*.

Princeton Group Simplifies Forty Languages

A group of about one hundred scholars in Indo-Germanic philology at Princeton University has just completed the simplification of forty languages of Europe and Asia under the leadership of Prof. Harold H. Bender. The object of this action is to simplify the mechanical setting of type, according to the *Journal of Education*.

One of the large linotype companies has accepted the recommendations made by Professor Bender, and it is

believed that not only will they benefit commercial printing, but that they will make possible, by reducing the cost of printing, the production of many scholarly works. Many characters have been eliminated and others simplified, so that it is possible to supply all the characters needed in the printing of these languages.

Girls Granted Smoking Privileges at Massachusetts College

At Massachusetts Agricultural College, Amherst, Mass., the deans have decided that it is no longer wrong for women students to smoke, and official sanction has been granted to their petition for this privilege. They have been requested, however, to use discretion in exercising their new freedom, and the fire ordinance forbids smoking in the dormitories. According to the *Journal of Education*, there is much speculation as to where they will smoke, but the fact that they will smoke if they so desire has been definitely established.

Nashville to Have \$2,000,000 Medical School for Negroes

A new \$2,000,000 model medical school for the training of negro physicians to be built in Nashville, Tenn., with gifts from the General Education Board, New York, and the Julius Rosenwald Fund, Chicago, was announced recently by Dr. J. J. Mulloney, president, Meharry Medical College, Nashville.

A part of the project, to which alumni will contribute \$200,000, will be a 120-bed hospital. There will be facilities for 200 students and departments of dentistry and pharmacy.

The college was originally established in Nashville in 1876.

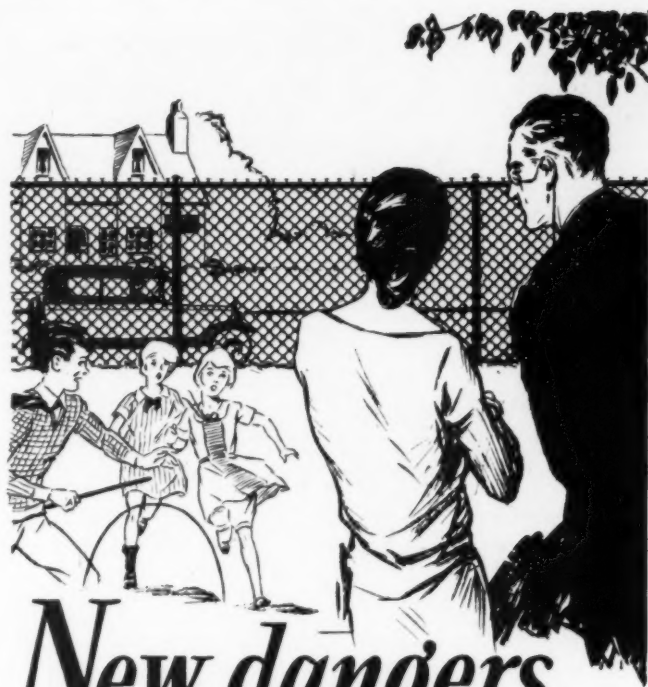
Destroyed by Fire—Alaskan School Is Rebuilt

Three score young Eskimos at Point Barrow, Alaska, are spending much of the endless winter night of the North in a brand new schoolhouse, which has come into being because of a special effort made by Congress last spring.

This is the northernmost school in all the world. Last winter it burned down, and the three American school teachers who occupied it were forced to take refuge in an Eskimo house. A trader contributed a crude building in which school was taught for the remainder of last winter.

Congress took note of the need for one little schoolhouse so far away. It hurried an appropriation through which provided the materials for a new schoolhouse and these materials were hurried North.

On August 27 the new school was christened by Jim Allen, old-timer of the far North, who broke a bottle of seal oil over the cornerstone as a part of the ceremony.



New dangers demand New Safety Tiny Tots do need PAGE Protection

Children can be kept out of the street—discipline can be simplified. It is natural for children to stay in a Page protected playground.

53 Service Plants erect fence everywhere. Plans—estimates—erection assistance—whatever you require for either Page Chain Link or Wrought Iron fence. Write for name and address—no obligation. Page Fence Association, 215 N. Michigan Ave., Dept. 73, Chicago, Illinois.

INVESTIGATE! Page Fabric available in Copperweld non-rusting wire—no painting—reduced maintenance—lifetime service.



"Boundary Lines" contains valuable data for educators on beautifying and protecting property.



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Directed by Dr. Sven V. Knudsen
Danish-American Educator

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All Denmark bids you welcome. You will visit places tourist eyes have never seen. Unlimited taxi service in Copenhagen without cost to you, as well as unlimited transportation in luxurious automobiles throughout the Danish mainland and on all Danish state railways.

The cultural and educational life of Denmark is open to you. Board and room without charge at the magnificent Chateau Lerchenborg, second only to Versailles. Admission to International Convention and Progressive Schools at Elsinore. International Convention for International Exchange of Boys. Unique Fourth of July celebrations at Rebild Park in Aalborg . . . Schools . . . People's Colleges . . . Museums . . . Cooperative Markets . . .

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Dear Dr. Knudsen:

Without obligation to me, please send full details and illustrated brochure on All-Educational Cruise.

Name

In the Educational Field

ANTANASIO MONTOYA is the newly elected superintendent of education in New Mexico.

L. F. HIRE, principal, Theodore Roosevelt High School, Wyandotte, Mich., has resigned that position to become principal of the new Western Junior High School in Pontiac, Mich.

PROF. JOHN C. EVANS, formerly associated with Columbia University, New York City, has been chosen as president of Newport College, to be opened in Newport, R. I., next September.

ELIZA D. KEITH resigned on January 31 as principal of the Sherman School, San Francisco, Calif. She will retire to private life.

CARROLL R. REED, formerly superintendent of schools, Bridgeport, Conn., has been appointed superintendent of schools, Minneapolis, Minn., succeeding DR. W. F. WEBSTER, who is retiring from the educational field.

DR. JAMES P. KINARD, dean, Winthrop College, Rock Hill, S. C., was elected acting president of that institution following the death of DR. D. B. JOHNSON, president.

A. M. WOODWARD has announced his intention to retire from the directorship of the British school, Athens, Greece, and H. G. G. PAYNE of Oxford has been appointed to the post.

JOHN A. CRAIG, principal, senior high school, Muskegon, Mich., has been named superintendent of the Muskegon schools to succeed M. W. LONGMAN, superintendent for eight years, who has declined reelection. MR. CRAIG was given a three-year contract. The teachers of Muskegon recently honored SUPERINTENDENT LONGMAN by presenting him with a life membership in the National Education Association.

DR. WILLIAM H. P. FAUNCE, president, Brown University, Providence, R. I., since 1899, has resigned, his resignation becoming effective with the ending of the Spring term.

H. S. UPJOHN has been acting as superintendent of schools in Los Angeles County, Calif., in the place of the late MARK KEPPEL. A statewide competitive examination was held on January 30 to determine who will be appointed to that office permanently.

PROF. FRANK E. BASS, formerly principal of the Centerville High School, Centerville, Tenn., has accepted the appointment as superintendent of schools, Mount Pleasant, Tenn., to succeed DUDLEY S. TANNER, who has accepted an appointment on the state board of education.

FRANK A. FINLAY has been appointed principal of the Moorehead Elementary School, Pittsburgh, Pa.

DR. JAMES M. KIERNAN, who has been acting president of Hunter College, New York City, will be installed as president sometime during March.

DR. JAMES O. ENGELMAN is the new appointee to the office of president at Kent State Normal College, Kent, Ohio.

PAUL D. COLLIER has been appointed superintendent of schools, Simsbury, Conn., succeeding E. S. RUSSELL, who has become director of the teacher training school at New Haven, Conn.

ALLEN WINSLOW PURBER has resigned as principal of the Mary E. Wells High School, Southbridge, Mass.

HERMAN C. RICHTER, principal of the Bridgewater High School, Bridgewater, Mass., has tendered his resignation, which will become effective April 15. He is retiring from the educational field.

ALLEN C. CUMMINGS has resigned as principal of the South Hadley High School, South Hadley, Mass., after serving in that position for the last ten years. Ill health is given as the cause for his resignation.

MAY TRUMPER has retired as state superintendent of schools, Montana, and ELIZABETH IRELAND, the new superintendent, has taken up her duties in that office.

ELMER K. SEXTON, who has been associated with the schools in Newark, N. J., for the last thirty-five years, and who has served as assistant superintendent of schools there for the last seventeen years, retired from his office on February 1.

W. J. SHIRLEY has accepted the appointment as superintendent of schools, Havre, Mont., succeeding ELIZABETH IRELAND, resigned.

A. E. CROSS, who for many years has been superintendent of schools at White Pigeon, Mich., died on New Year's day.

ROBERT WILLIAMS is to become acting president of Ohio Northern University, Ada, Ohio, and, upon the retirement of ALBERT E. SMITH, president of the university, in 1931, he will automatically become president of that institution.

JOHN G. HANSEN, formerly principal of the South Sioux City Senior High School, South Sioux City, Neb., has accepted the appointment as superintendent of schools at Osceola, Neb.

CHANNING H. GREENE, headmaster of Penacook High School, Concord, N. H., has requested that he be released from his contract there in order that he may accept the principalship of the high school in Southbridge, Mass.

High Flying to Reward High Scholarship

Scholarship awards have taken many forms, but from Dillon, Mont., through the *Journal of Education*, comes word of the newest idea for inducing hard work in the student body. Frederick Woodside, president of the local airplane service and himself an aviator, has offered a free airplane ride to the Beaverhead County high-school pupil who makes the highest grades in his studies each semester. As a special attraction he added, "The higher the grades, the higher the flight."

TORO EQUIPMENT



Toro Park Special with 30" Mower

TORO Power Lawn Mowers for Schools and Colleges

A complete line of power mowers to meet all grass-cutting requirements—their efficiency, reliability, economy and durability already proved by years of service under the exacting conditions of golf clubs, parks and cemeteries.

For maintaining the campus, athletic fields, stadium, and general cutting, they greatly reduce the number of men formerly necessary with hand lawn mowers.

Among the well known educational institutions using TORO Grass Cutting Equipment are the following:

University of Ohio
University of Iowa
University of Dartmouth
Princeton University
Yale Athletic Association
Baylor School, Chattanooga, Tenn.
University of Denver
Montana State University

Write for new catalog of Toro Power Lawn Mowers

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Toro Standard Tractor

LOWEST UPKEEP EXPENSE



No Substitute for G&G Quality

1766 Schools now use
G&G Ash Removal Equipment

THE full life of G&G Equipment is still to be determined. Many G&G Hoists have been in constant use for 10 years, 15 years, 20 years, and upwards. In the Albany (N. Y.) High School a G&G Hoist installed 16 years ago still gives satisfactory service. When old Madison Square Garden in New York City was demolished, two G&G Hoists were removed that had been in constant use for 37 years.

In 44 states (wherever coal-burning heating systems are used) G&G Ash Removal Equipment is to be found in schools. It is now standard equipment with the Boards of Education in Pittsburgh, Seattle, Kansas City, Cleveland, Baltimore, Boston, New York and elsewhere. Maximum speed with positive safety, long life and freedom from repairs, plus a very desirable labor saving. Electric and Hand-Power models.

Write for illustrated catalog

GILLIS & GEORGHEGAN
523 West Broadway New York



Telescopic Hoist
With Automatic Stop and Gravity Lowering Device

News of the Month

Los Angeles Man Heads Education in California

Vierling Kersey, director of part-time education and assistant superintendent of schools, Los Angeles, is the newly appointed superintendent of education for California to succeed William John Cooper who is now commissioner of education for the United States.

Superintendent Kersey received his education in the public schools of Los Angeles and at the University of Southern California where he earned the A.B. and A.M. degrees. He began his professional work in the Los Angeles schools and was later appointed to the principalship of Polytechnic Evening High School, said to be the largest evening high school in the world. From this position he was advanced to the position of director of part-time education and assistant superintendent of schools, in which capacity he had charge of part-time schools, evening high schools, adult education and vacation schools and elementary schools.

Spelling List of 2,500 Words Adopted for New York Schools

As a means of improving the vocabulary of pupils in the public schools in New York City, the board of education has issued a spelling list of 2,500 words which every pupil in the elementary grades is expected to acquire as he advances. The list, it is reported, was prepared by the director of the bureau of reference, research and statistics, following a national survey of spelling lists used in leading school systems throughout the country. The list will form a part of the revised course of study in spelling for elementary schools soon to be recommended for adoption by the board of superintendents.

Centralia Teachers Receive Free Medical Care

Under the terms of a hospital-school contract which has been drawn up in Centralia, Wash., all teachers and their wives and children are eligible to membership in a club which assures them expert medical attention, free hospital service and necessary medicines in times of illness. The membership fee is one dollar. To date there are eighty-five members enrolled, according to a report in the *Kansas Teacher*. The name of the hospital that provides this service was not mentioned.

Group Plan Inspires Initiative in Pupils

"Just give them a chance and your pupils will do ten times as much work as you would ever dare to assign them. But first you must set them free to take responsibility," said Edward R. Maguire, principal, School 61,

the Bronx, N. Y., in addressing an assemblage of Boston teachers and principals on the advantages of the group study plan. Under the group study plan, according to Mr. Maguire, each teacher divides her class into two or more divisions and instructs each division separately while the other pupils are studying.

Sixth Grade Pupils Publish Newspaper

"A Sixth Grade Newspaper," is the title of an article appearing in a late issue of the *North Carolina Teacher*, in which is described the procedure followed by the sixth grade pupils at Victory School, South Gastonia, North Carolina, in publishing their first newspaper. Perhaps this is not the first paper to be published by sixth grade pupils, but when it is considered that the job was carried out at a small profit to the class, it is a commendatory piece of work.

It was decided that the paper should consist of five pages and should sell for five cents a copy. Advertisements were solicited in order to pay the cost of printing, and each room was asked to contribute something in the way of news for the paper.

With the cooperation of every pupil in the class the paper was published at a total cost of \$7.25. Advertisements brought returns of \$1.50, and the 156 copies sold brought in \$7.80. This gave the class a profit of \$2.05.

Urge Library Schools for Latin American Universities

The establishment of library schools or chairs of library science in the several universities of the Latin American countries; the establishment in Latin America of associations of librarians and bibliographers; the translation and publication in Spanish, Portuguese and French of standard textbooks on library science and the translation and publication in Spanish, Portuguese and English of the best literary, scientific, bibliographic and historical productions by citizens of the American republics, was urged by the governing board of the Pan American Union after hearing the report of its permanent committee on bibliography at a recent meeting.

Expansive Building Program Planned for Bronx

Recognition of the fast growth of the Borough of Bronx, N. Y., is evidenced in the 1929 building program of the Board of Education of New York City. The total cost of carrying out the city's program is set at \$57,224,000, of which the Bronx is apportioned \$13,130,000. There are to be fourteen new buildings and additions to four existing structures in the Bronx. Vocational, continuation, junior high, high and elementary-school buildings are provided for in the plans.



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*Your's on
request*

*BULLETIN
124*

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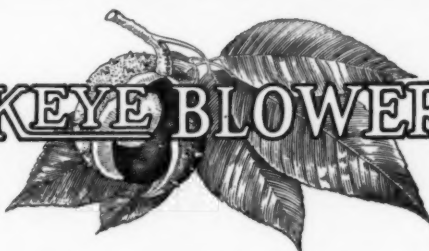
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Announcing the "900" Series Buckeye Heatovent

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its full heating duty in very severe sub-zero weather. It is capable of complete and accurate automatic temperature control in sub-zero weather and will not overheat even in very mild weather. Its heating element is the Buckeye Sectional Copper Tube Radiator which repeated freezing does not harm. It is equipped with time tested, highly efficient Buckeye Multi-blade Fans. It projects but 9½ inches into the aisle, and is only 34 inches high, which will allow installation under practically all windows without obstructing any of the light. It represents a distinct achievement in heating and ventilating units for school rooms, offices, churches, etc.



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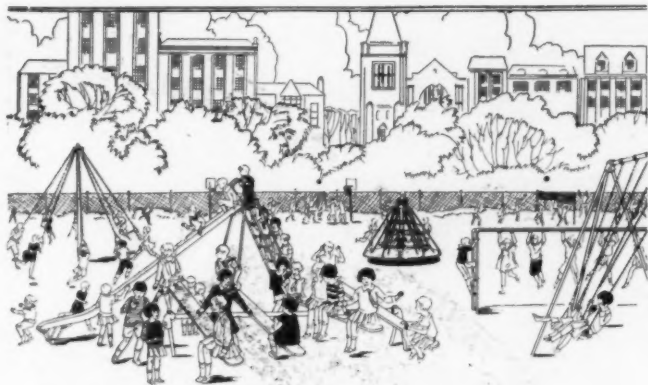
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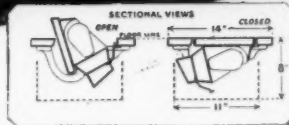
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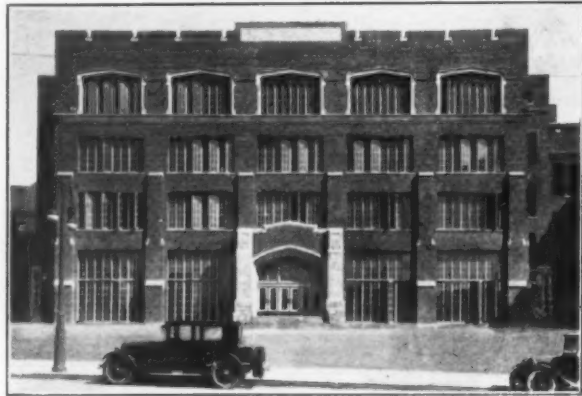
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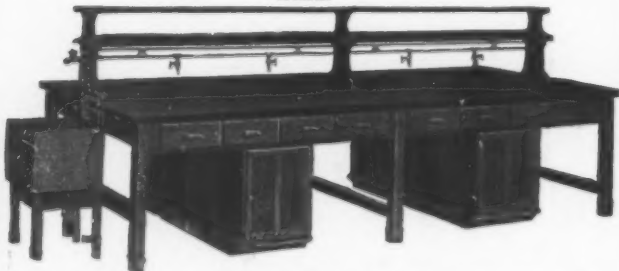
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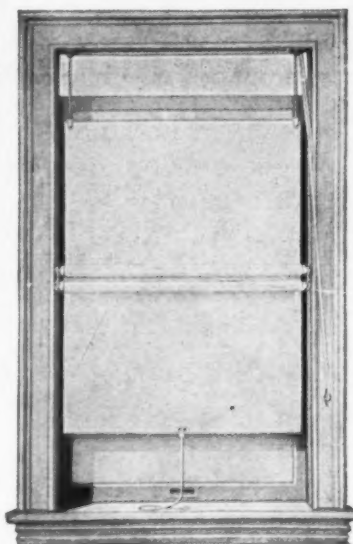
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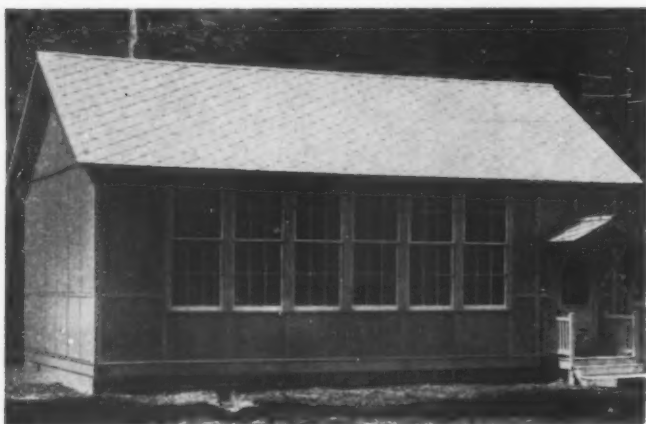
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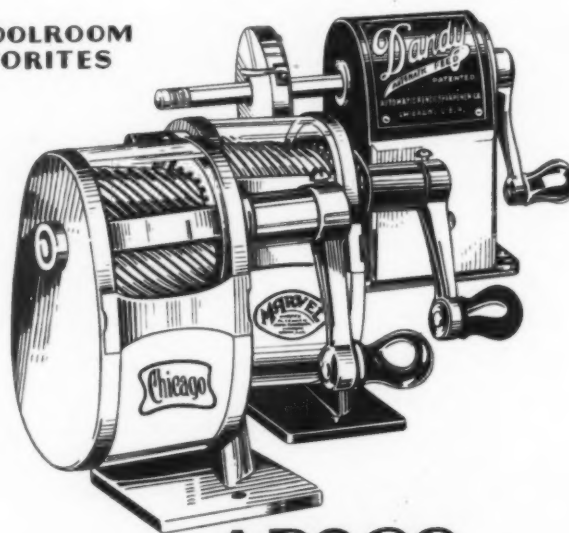
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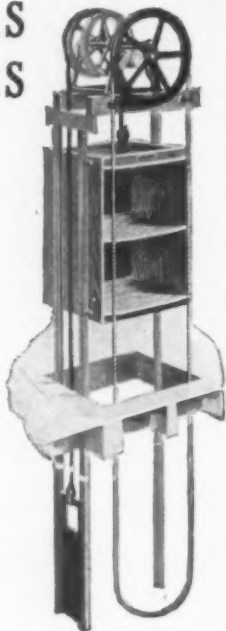


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Architects who specialize in school designing know from observation and contact with school officials, what is required of school floors. And from experience, they know what materials best meet these requirements. Two hundred of these "specialists" specify BLOXONEND for gymnasiums and school shops.

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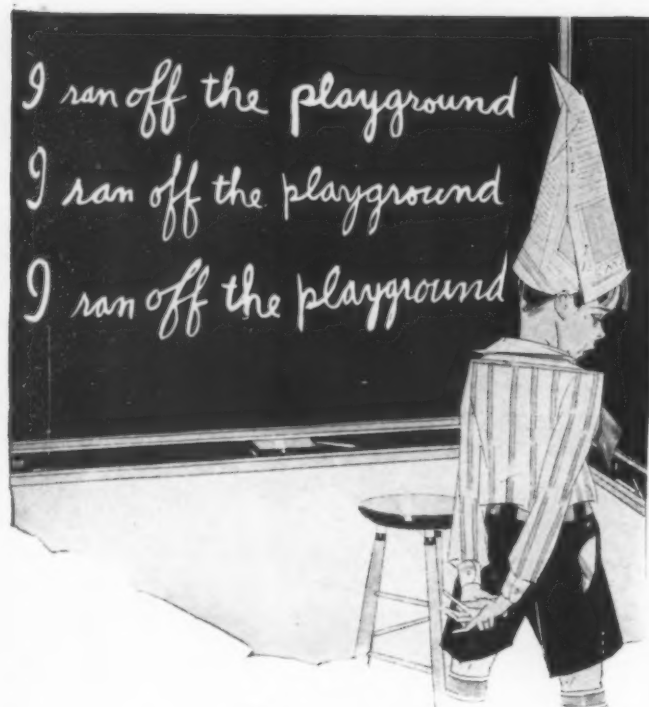
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...Keep him on with an Anchor Fence

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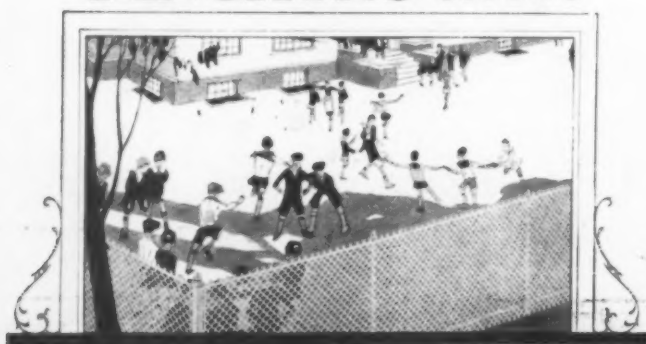
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In National Desks, equipped with the Moeser Extended Arm, pupils sit squarely in their seats. The back is supported when writing—working space is more than doubled—no turning to rest arm while writing—eliminates facing light and uncomfortable positions that bring on "last hour uneasiness."



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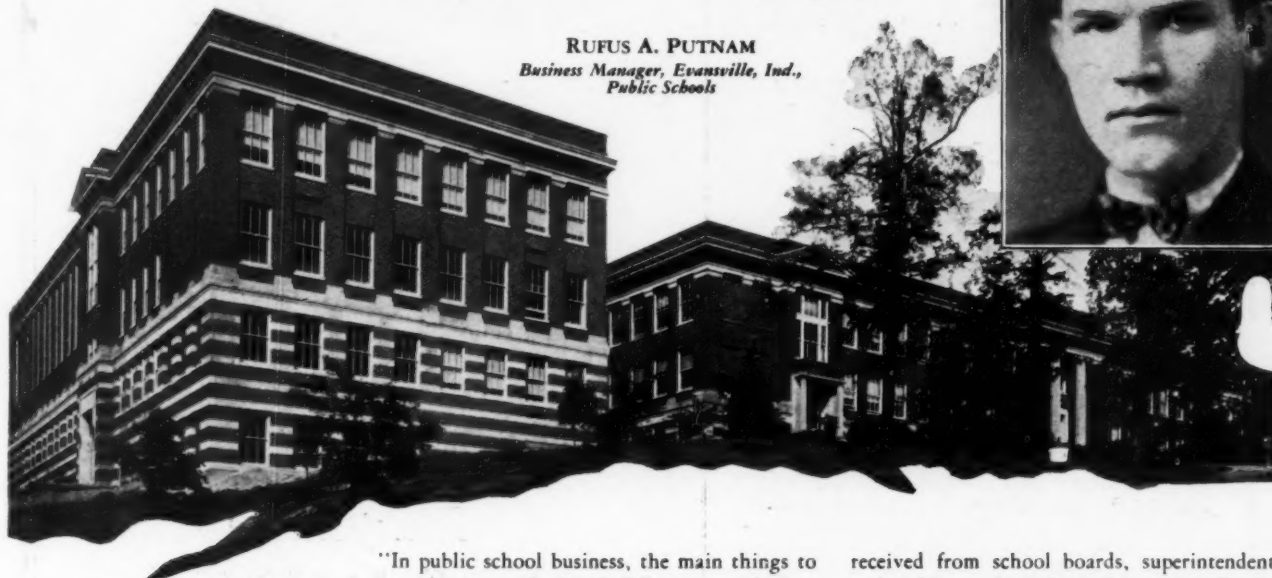
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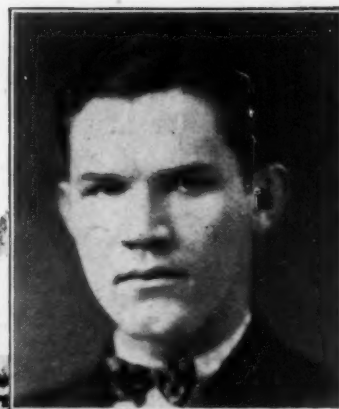
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... no other flooring can take the place of Maple



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"In public school business, the main things to consider in purchasing buildings or equipment are maintenance and upkeep. Thousands of dollars are saved each year because business executives know how to economize on building construction. It is true that some other floorings are cheaper, but it goes without saying that Maple is the best flooring that can be obtained for classrooms, gymnasiums, and corridors... because over a period of years it is the most economical.

"Maple floors are always smooth and never have a tendency to disrupt or pull apart. We are especially pleased with Maple floors in our gymnasiums because they stand the wear and tear, and in our classrooms because they are easily kept clean and do not require the attention that ordinary flooring demands. For corridors, I know of no other wood that could take the place of Maple. The life of Maple is many years longer and the maintenance is far less than any other wood flooring being put down today.

This statement from Rufus A. Putnam, Business Manager of the Evansville, Indiana, Public Schools is typical of the many recommendations

received from school boards, superintendents, and architects throughout the country. It gives added weight to the generally accepted opinion that Northern Hard Maple Flooring best fills the needs of educational structures.

Back of the widespread use of Northern Hard Maple in school buildings is the fact that here is one flooring material which combines warm, dry, cushioning comfort with the qualities of lasting wear which school use demands.

This resilient flooring material is remarkably tough-fibred and tight-grained. It will not splinter or splinter. Scuffing, youthful feet and the moving of equipment simply make it smoother with time. Northern Hard Maple, moreover, because of its permanent smoothness, is exceptionally easy to clean and keep clean. It offers no open lodging places for dust and germ-laden dirt to collect. And it permits quick, simple, permanent anchorage for seats.

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MAPLE FLOORS IN COLOR—By a new special staining process—the Marietta-Murphy Finishing System—Northern Hard Maple Flooring may now be given a variety of beautiful, lasting color finishes. Standard finishes as follows:

EARLY AMERICAN	AUTUMN BROWN	DOVE GRAY	PASTEL GREEN	SEAL BLACK
SPANISH BROWN	SILVER GRAY	ROYAL BLUE	ORCHID	NATURAL

Write for free booklet, "The New Color Enchantment in Hard Maple Floors"

MAPLE FLOORING MANUFACTURERS ASSOCIATION
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The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**

Floor with Maple

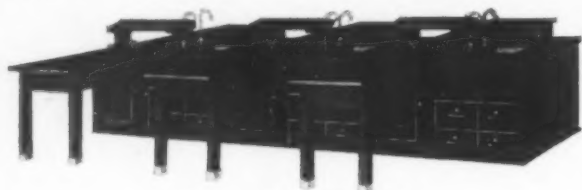
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Student Capacity of any
Room Increased by

Kewaunee

Lincoln Science Desks

For the school that needs more room, Kewaunee Lincoln Science Desks solve the problem. They are designed to allow more students to work comfortably in present buildings. Besides increasing pupil capacity of present buildings, they offer many other advantages.



Science Desk No. 8030

Many Other Advantages

With the Kewaunee Lincoln Desk, no lecture room is required. All students face the instructor while doing all the work in one place.

The instructor may give demonstrations or hold class recitations in the same room with the experimental work.

No definite periods need be set for demonstration and laboratory work.

The desk permits the instructor to give a lecture, demonstration or discuss any difficult phase of the experiment during the laboratory period.

With equal ease a demonstration can be stopped by the instructor at any time and the students permitted to follow out individual laboratory experiments.

Where the science work of the entire school does not cover the entire period of the school day, the desk can be used as a regular classroom desk. This avoids vacant rooms and helps to cut down the cost per room in new buildings.

Used in the Lincoln School

These desks are used in the Lincoln School of Teachers College, New York City, New York; University High Schools at Ann Arbor and Iowa City, and in other prominent schools, where the highest educational standards are desired.

Before you make plans for future laboratory equipment, ask us for our catalog of Lincoln Science Desks. Address the factory at Kewaunee.

Kewaunee Mfg. Co.
LABORATORY FURNITURE EXPERTS

C. G. CAMPBELL, Pres. and Gen. Mgr.

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Buying Points of ASBESTONE Flooring

ASBESTONE Plastic Magnesia Flooring meets EVERY requirement of schools, colleges and other institutions. It is unequalled for either new work or remodeling.

Durable

Non-dusting, fireproof, waterproof. Preserves its fresh appearance under years of terrific wear.

Inexpensive

Moderate first cost, upkeep practically nil.

Sanitary

Smooth, jointless, easily cleaned; may be waxed and polished.

Comfortable

Easy to the tread, non-slippery, noiseless.

Easily Applied

Over any new or old sub-floors, at any angle, over and around any irregularities.

Distinctive Appearance

A large variety of rich colors.

Service

Our own chemical laboratory and technical department test and verify every shipment for uniform, high quality. A large staff of skilled mechanics insure completion of the largest contracts on schedule.

Guarantee

A uniformly high standard product, backed by the integrity of the Muller name and more than 20 years of manufacturing experience.

*May we send you samples
and descriptive literature?*

FRANKLYN R. MULLER, Inc.

Manufacturers of Asbestone and Sana-bestos Tiles

303 Madison St.

Waukegan, Illinois

Established 1906

Holding Child-Interest

by use of Motion Pictures, is now the Accepted Method!



BELL & HOWELL Filmo
Projector 57E, for school use

No pictures can equal those thrown on the screen by the New BELL & HOWELL Filmo School Projector

Educationalists on all sides have turned to the motion picture because it offers the ideal way to capture and hold the attention of the child.

Words can be forgotten. But a picture will indelibly register on the brain. It stirs the imagination—gives rise to associative themes—by this very process causing the deep rooting of ideas during the most receptive of all periods in the life of the human being. But to educationalists and teachers there is nothing so disheartening as movies that flicker—fail to register correctly on the screen—are blurry and indistinct. And there's nothing more disappointing, more disorganizing, to the children.

That is why in the selection of your motion picture equipment your choice should invariably be a Bell & Howell FILMO 57E School Projector—the kindest of all movie projectors to the eyes—the projector of pictures as brilliant, clear and steady as any seen on the professional screen. No pictures are comparable in brilliancy and quality to those thrown by this projector which comes to you as a direct result of Bell & Howell's 22 years' experience in the manufacture of professional motion picture cameras and equipment famous throughout the world for their quality.

FILMO uses the compact, non-inflammable 16 mm. film. It may be stopped

instantly on any single picture—runs backward or forward and is extra quiet in operation. With B. & H. Superbrite equipment it delivers greater illumination to the screen than any other 16 mm. projector made.

FILMO is light—compact—folds into minimum space. Easy to store. Easy to carry from room to room—and so simply constructed that any pupil can operate it with a few moments' instruction. It can be set up in a jiffy and it operates from any light socket.

Mail coupon for illustrated descriptive booklet—"FILMO in Schools and Colleges."

BELL & HOWELL

Filmo

BELL & HOWELL CO., 1830 Larchmont Ave., Dept. C, Chicago, Illinois
New York, Hollywood, London (B. & H. Co., Ltd.) Established 1907

BELL & HOWELL CO.
1830 Larchmont Avenue
Dept. C., Chicago, Ill.

Please mail me your booklet, "Filmo in Schools and Colleges," and give me further information regarding Bell & Howell equipment for school use.

Name.....Position.....

School.....

City.....State.....



MOBILE HIGH SCHOOL, MOBILE, ALABAMA

PERFECT VENTILATION
for SCHOOL BUILDINGS
and a proper diffusion of
light is accomplished with
BURLINGTON VENETIAN BLINDS

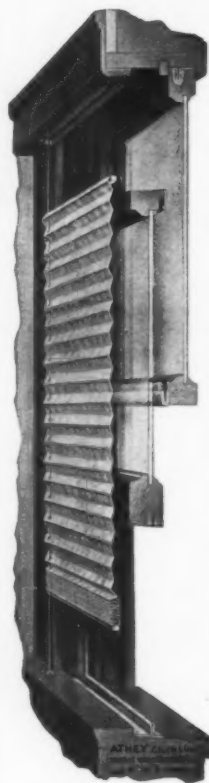
*Softens the
Sun's Glare*



*Controls the
Light*

BURLINGTON VENETIAN BLIND CO.
278 PINE STREET, BURLINGTON, VT.

School Shades



Perfect protection from the sun's glare yet with a soft glow of light all over the room.

ATHEY SHADES

without being touched by the hand may instantly be adjusted to shade only that part of the window on which the sun is shining.

This adjustment usually allows a large portion of the upper part of the window to admit soft day light or fresh air.

The sunlight on the shade also sends diffused light all over the room.

ATHEY Shades can be furnished light tight in non-translucent material to darken any room for motion pictures.

Write for full particulars.

ATHEY COMPANY
6134 West 65th St. Chicago

Representatives in Principal Cities

In Canada

Cresswell-McIntosh, Regd.
Montreal and Toronto

If a catastrophe happened in one of your schools, could you face a bereaved parent and say: "We had the best fire escape obtainable"?



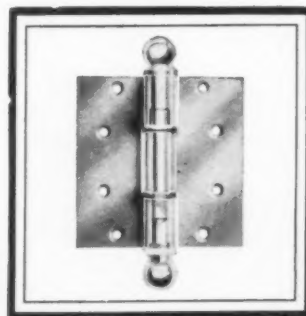
42 states now have schools safe in case of fire. Flame, heat, gases, smoke, ice and snow cannot deter the safe exit of children and teachers from the second or third floor of a burning schoolhouse, when a POTTER TUBULAR SLIDE is attached.

PANICS, which are more to be dreaded than fires, cannot happen, as fire drills are practiced on the Fire Escapes. There is no danger of crowding, the children becoming frightened into jumping or falling by accident, as is possible with other types.

POTTER MFG. CORP.

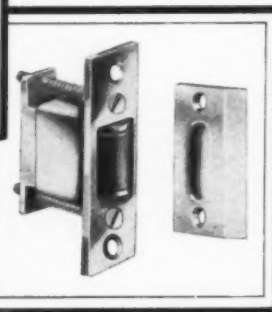
1861 Conway Bldg.
CHICAGO

The only Fire Escape with Service Records approved by the Underwriters' Laboratories



**They Bring
School**

Doors Under Control



This special school hardware by McKinney consists of a hinge providing constant friction control, (eliminating free-swinging, slamming doors); a Noiseless Roller Catch, taking the place of a metal latch; and a Rubber Door Stop acting as a cushion. The Noiseless Roller Catch requires no knob to retract the bolt to open the door. A push on the door is all that is necessary. Most class room doors open into the halls. The McKinney Catch therefore makes an ideal safeguard against fire and panic dangers. Write for details to McKinney Mfg. Co., Pittsburgh, Pa.

MCKINNEY
friction control
HINGES

That Old Vandal

"THE PUBLIC..."



WELL-BEHAVED under most conditions, the Public is still a Vandal in its treatment of public toilet seats. The only practical seat to use is one that simply cannot be smashed.

Whale-bone-ite is such a seat. Though it costs no more than the cheapest composition closet seat made, its unbreakable construction—guaranteed for the life of the building—immediately ends all replacement expense.

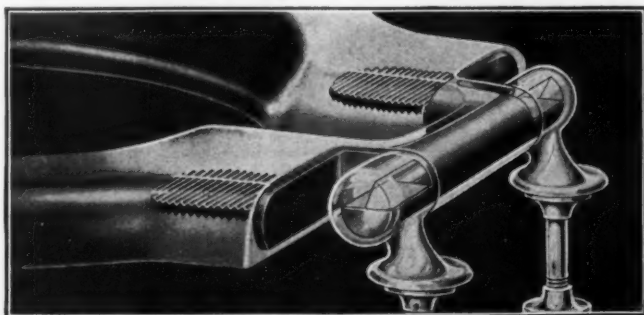
Its handsome polished whale-bone-ite surface will last a life-time. It is easy to clean and non-inflammable. Its hinge also is covered with Whale-bone-ite, giving it the same strong, polished surface as the seat, and making it non-corrosive.

The use of Whale-bone-ite Toilet Seats is spreading

to the guest bathrooms of fine hotels. Many new apartment houses are equipping all toilets with it.

*Send for free cross-section
—see its strength yourself*

Figures show that on the average ordinary seats have to be replaced about every three years. If you want to end this needless expense, just as it already has been ended in more than a million public toilets in modern and remodelled buildings, simply install Whale-bone-ite Seats as fast as other seats wear out. Not only will the replacement expense end, but the toilets will be cleaner as Whale-bone-ite is easier to keep clean. Without obligation send for a free Whale-bone-ite cross-section. Simply address Dept. G-1, Seat Division, The Brunswick-Balke-Collender Co., 623 South Wabash Avenue, Chicago.



THE WHALE-BONE-ITE Seat and Hinge form an unbreakable unit. The seat is molded around a laminated core of alternating-grain layers of hardwood, making it proof against warping, cracking and splitting. The die-cast hinge is molded integral with the seat.

THE BRUNSWICK-BALKE-COLLENDER CO. / Chicago

Albany	Charlotte	Denver	Kansas City	New York	Seattle
Atlanta	Chicago	Des Moines	Los Angeles	Philadelphia	St. Louis
Birmingham	Cincinnati	Detroit	El Paso	Pittsburgh	Tampa
Boston	Cleveland	Harrisburg	Minneapolis	Richmond	Washington
Buffalo	Dallas	Houston	New Orleans	San Francisco	Montreal
	Ottawa		Toronto		Havana

BRUNSWICK
WHALE-BONE-ITE
TOILET SEATS



In This Issue of Your Magazine

PUBLICATION value is found in the advertising pages as well as in the text pages. Thus the school administrator, wishing to be advised on all progress that concerns his profession, makes a regular perusal of his magazine. And such perusal leads him from cover to cover, from the first page to the last. Here, for example, are a few excerpts taken from advertisements in this issue of *The NATION'S SCHOOLS*. They have intimate bearing on those facilities that comprise the physical makeup of the modern school.

* * *

"Educationalists on all sides have turned to the motion picture because it offers the ideal way to capture and hold the attention of the child. Words can be forgotten. But a picture will indelibly register on the brain. It stirs the imagination—gives rise to associative themes—by this very process causing the deep rooting of ideas during the most receptive of all periods in the life of the human being."

* * *

"Modern schools demand modern seating! Obsolete seating belongs to 'the little old red school house.' Inefficient, depressing, inhuman, out-of-

date seating cripples administration—handicaps pupil progress."

* * *

"When Socrates held school in Athens, the wood-burning brazier was the chief source of heat, and the open window or door the only means of ventilation. Fortunately, the rooms in which this venerable Greek philosopher taught were large and the number of his pupils was small. Otherwise, the fumes from the burning fuel would soon have undermined his own and his pupils' health. Nowadays, with a single school attended by several thousand students instead of a mere 10 or 12, the problem of heating and ventilating becomes a vital and exacting one."

* * *

"Buying resilient floors for your building is largely a matter of finding a floor contractor in whom you can have confidence. Contractor A's bid is low—low enough to give grounds for question. Contractor B is highly recommended—and sky-high in price. Shopping around seems to get you nowhere."

**Only those offering approved products or services for schools are invited
to use the advertising pages of *The NATION'S SCHOOLS***

How Little Rock High School Saves in Washroom Maintenance—



CLEANLINESS is an essential for citizen building—but here, as in all school activities, costs must be watched.

In Little Rock High, Little Rock, Ark., and in hundreds of other schools, Bradley Washfountains are providing clean, healthful washing facilities at lowest possible costs.

Water is saved, for ten children can wash simultaneously, using no more water than one child would use at a faucet.

Floor space, too, is conserved—an important consideration in these days of increasing enrollments. Janitor work is reduced because the Bradley is self-flushing . . . easier to keep clean. The splashing of boisterous children is minimized and the water drips from their arms back into the bowl.

Bradley Washfountains are made in beautiful colors and in sizes, shapes, and types adaptable to any washroom—in new buildings or old.

BRADLEY WASHFOUNTAIN CO.

2207 Michigan Street, Milwaukee, Wis.



**A Few
Bradley Users**
Woodward High
School, Cincinnati, O.
St. Edmunds Dormi-
tory, Glendale, Ohio
Tilden High School,
Chicago, Ill.
Woodrow Wilson
School, San Diego, Cal.
State Trade School,
Stanford, Conn.
and hundreds of
others

**Every School
Board Should
Have this Book**

Catalog No. 1028 discusses
modern washroom require-
ments, shows all types of
Bradleys, numerous instal-
lation views and typical
washroom layouts.



BRADLEY WASHFOUNTAINS



LIQUA-SAN, the liquid soap, *touches no hands but the user's.* The roller towel has long ago been banished from the modern school but the *germ laden bar of soap*, passing from hand to hand, belongs as much to the dark ages of sanitation. Common colds and respiratory diseases are most often communicated by the hands and liquid soap is the only safe answer. Liqua-San is *pure, soothing, quick lathering, highly concentrated and cleansing.* Dispensers furnished at cost.

The HUNTINGTON LABORATORIES Inc.
HUNTINGTON - INDIANA

LIQUA-SAN
The Liquid Soap-



Aznoe's Have Available for School Appointments:

SCHOOL DIETITIAN: Age 25, Ph. B. Degree, Dietitian-Manager for years. Asks \$225 or equivalent. No. 2209.

SCHOOL DENTIST: Woman D.D.S., age 24, one year school experience available immediately. No. 2210.

SCHOOL AND SOCIAL SERVICE NURSES:
(A) R.N., age 46, post graduate Civics and Philanthropy, school and community work since 1916, asks \$150. (B) R.N., age 28, eight years School and Public Health experience, available July first. Asks \$150. (C) R.N., age 35, seven years school nurse; at same time teaching Red Cross classes; college training and post graduate work in public health; available July first for opening at \$200. Prefers supervision.

AZNOE'S

CENTRAL REGISTRY for NURSES
30 North Michigan Avenue CHICAGO, ILLINOIS

Why experiment?

Choose the
Band Uniform
that others
Recommend



140 Color Combinations
to Select from

Made of sturdy, all-wool materials,
thoroughly rainproofed

Send for samples and details,
stating class colors



STANDARD APPAREL CO.

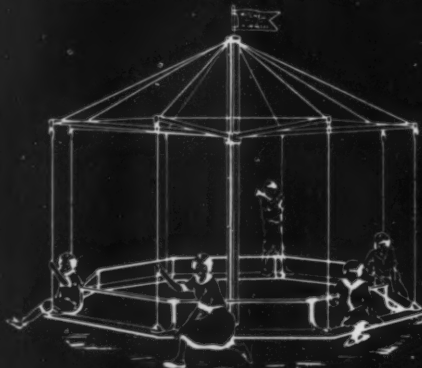
Manufacturers

5604 Cedar Ave.

Cleveland, Ohio

MITCHELL
BETTERBILT
Playground Apparatus

Schools—Homes—Parks



Mitchell Whirl

The Mitchell Whirl, shown above, is just one number in the "Betterbilt" line. Send for free illustrated catalog and name of your state distributor.

MITCHELL MFG. CO.

1808 Forest Home Ave.

Milwaukee, Wis.



Holtzer-Cabot

SIGNAL SYSTEMS

ESTABLISHED 1875



The Fire Exit Drill

THE fire alarm and exit drill system is a recognized necessity in all schools.

The efficiency of a fire drill depends on the proper design of the system and the reliability of the apparatus.

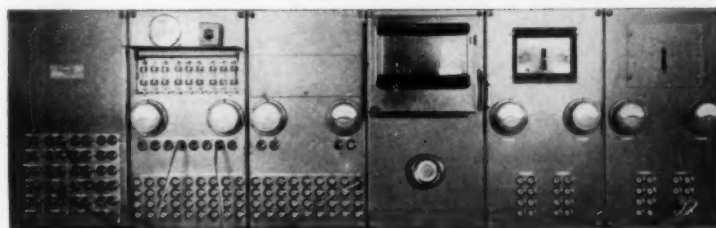
The conscientious school board will not look with favor upon the selection of an inferior system upon which may depend the lives of little children.

Holtzer-Cabot systems are designed for all types of schools and provide the utmost in reliability.

Detailed information sent upon request.

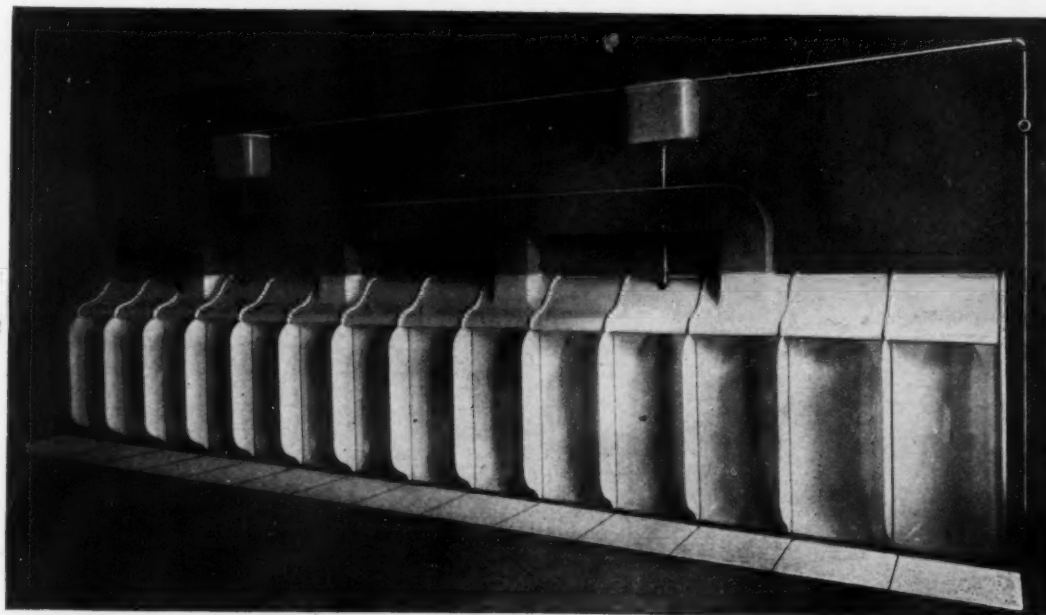
The Holtzer-Cabot Electric Co.

Boston — Chicago — New York — Baltimore — Detroit
Philadelphia — Cleveland — Minneapolis — Syracuse
Pittsburgh — Kansas City



"EBCO" VENTILATED WALL URINALS

WRITE
FOR
CATALOG



"EBCO"
FOR
QUALITY

Positive sanitation by complete ventilation at the source of fouling distinguishes the EBCO ventilated urinals from ordinary types—a free vent area of 25 square inches for each urinal section. Urinals are heavy vitreous non-absorbent enameled and fittings are of nicked brass.

Spreaders distribute the water from the automatic flushing tanks evenly over the back wall so that all urine is completely washed away. The unit may consist of any number of stalls arranged in a single range against a wall or in two ranges back to back.

THE D. A. EBINGER SANITARY MFG. CO.

401 W. Town St., Columbus, Ohio

Manufacturers also of Ventilated Closets, Wash Sinks, Drinking Fountains and Steel Partitions



SOUND-PROOF DOORS AND PARTITIONS

to sound separate
large rooms or in-
sulate small ones

Architects have proved that the sound-proofing efficiency of Hamlin's Sound-Proof Doors and Folding Partitions makes possible economy of space and simplification of plans that reduce building costs and greatly improve the utility of adjoining rooms. As illustrated at the left, the auditorium receives the benefit of the gymnasium to use as a very large stage, thereby making the gymnasium more valuable because of greatly increased seating facilities. While each may be used separately if desired. This folding partition in the Bexley High School, Columbus, Ohio, is 19 feet high by 60 feet wide.

Send for Catalog

**IRVING
HAMLIN**

Manufacturers

Sound-Proof Doors and
Folding Partitions

1501 Lincoln Street
Evanston, Ill.

The Ideal Indoor Grandstand

Where Floor Space Is Limited.

The

Wayne Type "C"

Safe Steel Grandstand

Especially designed to provide the maximum seating capacity in small areas. Easily erected, will not mar floor. Can also be used outdoors.

Prompt Shipment. Order now
for your basketball games.

Catalog and prices on request

Wayne Iron Works

Lincoln Highway and Pembroke Ave.

Wayne, Penna.

Representatives in:

BALTIMORE; CAMBRIDGE, MASS.; NEW YORK; INDIAN-
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KANSAS CITY

WELCH LABORATORY Vocational and Library FURNITURE



No. 2530 COMBINATION
PHYSICS AND CHEM-
ISTRY TABLE. Made

of selected white oak

—birch top, ebon-

acid finish. This

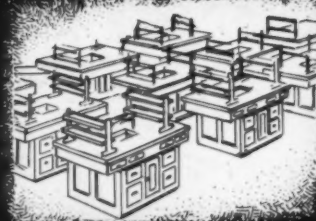
is one of many

special designs de-

veloped for our cus-

tomers. Utility and

functional use is em-
bodied in every design.



Recent Welch installations:

University of Minnesota
University of Illinois
Milwaukee, Wisconsin
Indianapolis, Indiana
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Welch Laboratory Furniture is manufactured in our own factory at Manitowoc, Wisconsin

Ask for the
New Catalog "F"
Address
Dept. K-5

A Sign of Quality

QUALITY
WELCH
SERVICE

A Mark of Service

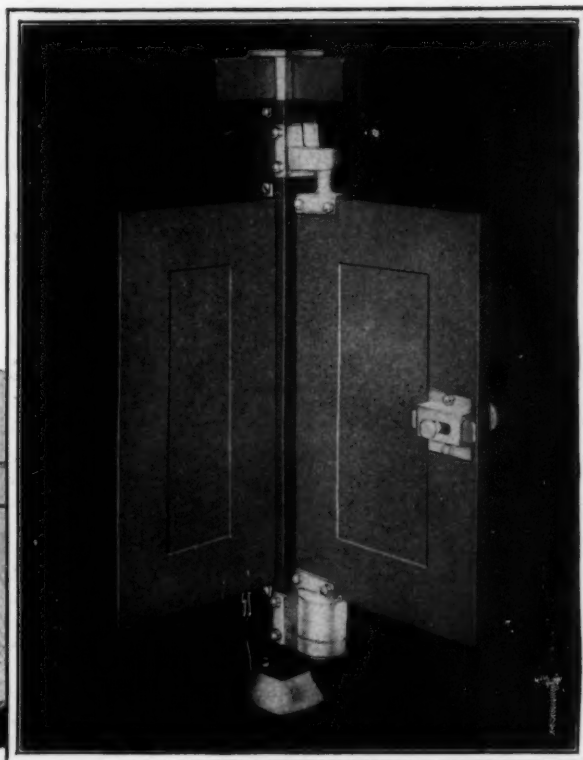
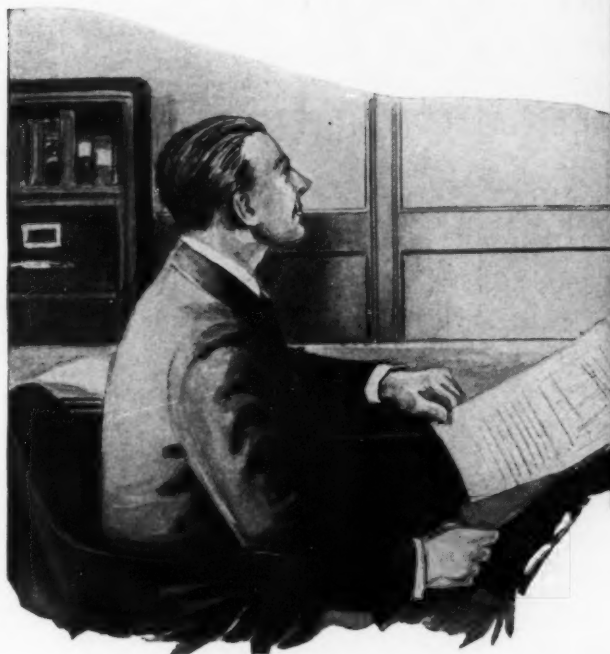
W. M. Welch Manufacturing Company

Factory repre-
sentatives in all
principal cities.

General Offices, Scientific Apparatus Factory and Warehouse
1516 Orleans St., Chicago, U. S. A.

Laboratory Furniture Factory and Warehouse
Manitowoc, Wis., U. S. A.

Photograph of Marblmetal sample ready to be shown to those interested in this latest building development.

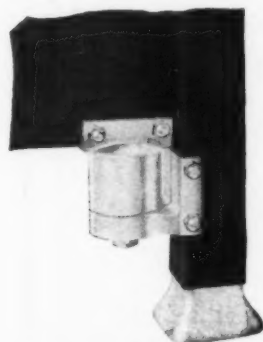


To the Builder Who Wants to See Marblmetal

EVERYTHING about Marblmetal is fine. It is rich in quality. Combines all the advantages of marble and metal and is designed and engineered to be entirely in a class by itself.

Three-quarter inch, insulated panels and doors. Never before such strength built into a toilet partition. Will not absorb odors. Beautiful, durable, easy to keep clean. Chromium plated hardware.

Marblmetal is an outstanding achievement and to the builder who wants to see Marblmetal, we offer to show a sample small enough to stand on your desk and big enough to show every detail of its beauty, design and construction. Please address inquiry to our home office.



The new Marblmetal hinge has been subjected to a test equal to more than ten years' service without perceptible wear. That's quality! Note the well known Mills internal shoe, a definite sanitary feature. All chromium plated. And that's more quality!

THE MILLS COMPANY
A Mills Metal Partition for Every Purpose
917 Wayside Road . . . Cleveland, Ohio
REPRESENTATIVES IN ALL PRINCIPAL CITIES

MARBLMETAL

Barriers of Safety

Stewart Iron and Wire Fences for school enclosures are exceptionally strong and rugged.

They afford the utmost in protection and durability.

Write for Catalog.

THE STEWART IRON WORKS CO., INC.

516 Stewart Block
Cincinnati, Ohio

Representatives
in principal cities.



In Philadelphia Your Choice Should Be

THE HOTEL MAJESTIC

BROAD ST. AND GIRARD AVE.
PHILADELPHIA

400 LARGE ROOMS

only Hotel in Philadelphia with a
subway entrance from main lobby

MOST MODERATE RATES!

Single room, running water \$2

for two \$3.50

Single room, private bath \$3

for two \$5-6

Garage connected with hotel

WIRE AT OUR EXPENSE
for RESERVATIONS!

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HOTEL MONTCLAIR

New York City
Lexington Ave.

49th to 50th St.

New York's newest and finest Hotel

800 Rooms 800 Baths

Radio in Every Room

3 minutes' walk from Grand Central,
Times Square, Fifth Avenue Shops
and most important commercial
centres, leading shops and theatres.
10 minutes to Penn. Station.

Grand Central Palace
only 2 short blocks away

S. Gregory Taylor,
President

Oscar W. Richards
Manager

Room & Bath
Tub and Shower

\$3 to \$5

per day

For 2 Persons

\$4 to \$6

per day



In the April Issue

Jens Jensen will have a timely article on landscaping the school grounds.

E. S. Richardson will discuss the country unit as it functions in Webster Parish, Louisiana.

N. M. Dunning will describe the architectural details of the Benjamin Nolan Intermediate School at Detroit.

Joseph H. Apple will write on motion pictures as a means of college publicity.

Charles W. Bursch will present an analytical study of high school teaching.

These and many other articles will be featured in *The April Nation's Schools*—valuable and vital material for the school executive.

9 out of 10 Outstanding school jobs in 1928 were

— MONEL METAL —

SOME OF 1928's TYPICAL MONEL METAL INSTALLATIONS

Alton Community Consolidated School Dist. Alton, Ill.	Fair Park High School, Shreveport, La.	Sara Lawrence College, New Rochelle, N. Y.
Batavia High School, Buffalo, N. Y.	Far Rockaway High School, Far Rockaway, N. Y.	Shaker Heights High School, Cleveland, Ohio
Beaumont High School, St. Louis, Mo.	Foreman Junior High School, Chicago, Ill.	Sharon Hill High School, Sharon Hill, Pa.
Birmingham Jr. High School, Boston, Mass.	Georgia School of Technology, Atlanta, Ga.	Shortridge High School, Indianapolis, Ind.
Bowdoin College, Brunswick, Me.	Girard College, Philadelphia, Pa.	Southern Jr. High School, Louisville, Ky.
Camden County Vocation School, Camden, N. J.	High Schools and Public Schools, Atlanta, Ga.	St. Andrew's College, Aurora, Ontario
Carleton College, Northfield, Minn.	San Diego High School, San Diego, Cal.	St. Patrick's High School, Pottsville, Pa.
Central Continuation School, Buffalo, N. Y.	Hillsborough County High School, Tampa, Fla.	Theodore Roosevelt High School, New York City
Central High School, Tulsa, Okla.	Hingham High School, Hingham, Miss.	Trinity College, Washington, D. C.
Cleveland Jr. High School, Tulsa, Okla.	North Junior High School, Everett, Wash.	Tufts College, Tufts College, Mass.
College of St. Teresa, Winona, Minn.	North Plainfield High School, North Plainfield, N. J.	Tulane University, New Orleans, La.
College of Industrial Arts Cafeteria, Denton, Texas	Orleans Parish School Board, New Orleans, La.	Union Theological Seminary, New York City
Davenport High School, Davenport, Ia.	Panhandle School, Panhandle, Texas	University of Kentucky, Lexington, Ky.
Detroit University, Lockmore Village, Mich.	Pickham Vocational School, Buffalo, N. Y.	Vashon School, St. Louis, Mo.
DeWitt Clinton High School, New York City	Providence High School, Chicago, Ill.	Verona High School, Verona, N. J.
East High School, Buffalo, N. Y.	Radcliffe College, Cambridge, Mass.	Washington University, St. Louis, Mo.
East Providence Junior H. S. East Providence, R. I.	Regis College, Denver, Colo.	Western Hills High School, Cincinnati, Ohio
Ecoise H. S., Ecoise, Mich.	Richmond Hill High School, Long Island, N. Y.	West Junior High School, Green Bay, Wisc.
Elementary Schools (15) Buffalo, N. Y.	Rochester High School, Rochester, Mich.	Wisconsin State Teacher's Col- lege, Oshkosh, Wisc.
	Rock Island High School, Rock Island, Ill.	Yeager School, Chicago, Ill.
	Rutgers University, New Brunswick, N. J.	
	Samuel J. Peters Schools, New Orleans, La.	

Note: Names of manufacturers and fabricators supplying Monel Metal for these jobs will be gladly furnished on request.

Monel Metal is a technically controlled Nickel-Copper alloy of high Nickel content. It is mined, smelted, refined, rolled and marketed solely by The International Nickel Company, Inc. The name "Monel Metal" is a registered trade mark.



THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.



The Value of the Dictionary

is the title of a new booklet written to help you in Teaching the Dictionary. Here are a few suggestions of the lessons included:

First Dictionary Lessons
Relative Position of Letters
How to Find Words
What You Find
Pronunciation
How to Find Meanings
Parts of Speech and Meanings
Unusual Uses of Words
Synonyms
The Hyphen, Etc., Etc.

Copies of this new booklet will be sent FREE to teachers upon request.

G. & C. Merriam Company
Springfield, Mass.

Publishers of the
Merriam-Webster Dictionaries
for over 85 years
Look for the Circular
Trade-Mark Get the Best



SAMUEL FRENCH'S PLAYS FOR SCHOOLS

Include the latest and most successful works of the best authors. Among the new additions to the 1929 catalogue are:

The Best People, Laff That Off, The Meanest Man in the World, New Brooms, Skinner's Dress Suit, The Mystery Man, Is Zat So?, The Gossipy Sex, A Prince There Was, Fool's Gold, Little Old New York, Wake Up, Jonathan! The Fall Guy, The Springboard, Tommy, and Take My Advice.

Our new 400-page Catalogue is a cyclopedia of reference, including descriptions of thousands of plays. It is indispensable to all who produce, read and study plays. Send for the 1929 edition. Free of charge.

SAMUEL FRENCH
INCORPORATED 1898

THOS. R. EDWARDS
Managing Director

25 WEST 45TH STREET
NEW YORK CITY



An Applicator Bottle

furnished with our compliments in your own medicine cabinet will soon convince you that

MERCUROCHROME—220 SOLUBLE

(dibrom-oxymercuri-fluorescein)

IS THE

Logical Successor to Tincture of Iodine

FOR

First Aid Prophylactic and General Antiseptic Use

Mercurochrome stains as Iodin does, and it is the stain of Mercurochrome, as it is of Iodin, that shows just where and how effectively the germicide has been applied; it fixes the bactericidal agent in the field for a relatively permanent period which prolongs the asepsis or the sterilizing effect, and it provides for demonstrable penetration into the tissues beneath the superficial surfaces. Inasmuch as Mercurochrome is definitely proved an extremely efficient general antiseptic, it is only reasonable to consider it the successor to Iodin in this field, as it is free from the objectionable features of Iodin, for

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